

AFGL-TR-76-0313



REMOTE WIND MEASUREMENT IN FOG USING LASER DOPPLER VELOCIMETRY

M. R. Brashears, W. R. Eberle

Lockheed Missiles & Space Company, Inc. Huntsville Research & Engineering Center 4800 Bradford Drive, Huntsville, AL 35807

December 1976

Final Report for Period 1 July 1976 — 31 December 1976

BOC FILE COPY

Prepared for

AIR FORCE SYSTEMS COMMAND AIR FORCE GEOPHYSICS LABORATORY UNITED STATES AIR FORCE HANSCOM AFB, MASSACHUSETTS 01731



Qualified requestors may obtain additional copies from the Defense Documentation Center. All others should apply to the National Technical Information Service.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Date Entered)

(19) REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
AFGU-TR-76-0313	3. RECIPIENT'S CATALOG NUMBER
REMOTE WIND MEASUREMENT IN FOG USING LASER DOPPLER VELOCIMETRY.	Final July 1976 - December 1976
(14)	6. PERFORMING ORG. REPORT NUMBER, LMSC-HREC-TR-D497127
M.R./Brashears W.R./Eberle	F19628-76C-0237
Lockheed Missiles & Space Company, Inc. Huntsville Research & Engineering Center Huntsville, Alabama 35807	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 59200 20930102
Air Force Geophysics Laboratory Hanscom AFB, MA 01731	12. REPORT DATE Decomber 1976 13. NUMBER OF PAGES
Monitor/Frederick J. Brousaides 14 MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	272 15. SECURITY CLASS. (of this report)
The state of the s	Unclassified
Final rept. 1 Jul-31 Dec 76)	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
Approved for public release; distribution unlimite	
17 DISTRIBUTION STATEMENT TO the obstract entered in Block 20, if different from \$5.00 m.	om Report)
18. SUPPLEMENTARY NOTES	
19 KEY WORDS (Continue on reverse side if necessary and identify by block number,)
Wind Shear Remote Sens Atmospheric Effects Fog Laser Doppler Velocimetry	sing
A Laser Doppler velocimeter is an instrument for spheric wind. This report describes a test design	remote sensing of atmo-

A Laser Doppler velocimeter is an instrument for remote sensing of atmospheric wind. This report describes a test designed to validate the ability of the laser Doppler velocimeter to measure winds in fog. The test instrument was placed at Otis AFB for a test period of one month. It was operated during conditions of fog during the test period. Three-dimensional wind components were generated using three distinct computational algorithms. A description of the laser Doppler velocimeter and computational algorithms is presented. Wind measurement results and a discussion of those results is also given. Because the laser Doppler velocimeter used for the test is a research instrument, recommendations are made for improvement for a system designed to remotely measure winds in fog.

210105

NOTICE

This document is disseminated under the sponsorship of the Air Force Geophysics Laboratory in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

Use of trade names of manufacturers in this report does not constitute an official endorsement of such products or manufacturers, either expressed or implied by Lockheed Missiles & Space Company, Inc., or any agency of the United States Government.



PREFACE

This final report is a description of the technology used and results obtained in a test intended to verify the feasibility of using laser Doppler velocimetry for measurement of low speed winds in fog. The test was conducted by personnel of Lockheed Missiles & Space Company, Inc., Huntsville Research & Engineering Center. Lockheed-Huntsville personnel contributing to this effort were E.J. Gorzynski, G.M. Miller and K.R. Shrider. The dedicated efforts during the test phase of Dr. Alan I. Weinstein and Frederick J. Brousaides of the Air Force Geophysics Laboratory are gratefully acknowledged.

CONTENTS

Section		Page
	PREFACE	3
1	INTRODUCTION AND SUMMARY	7
	1.1 Background	7
	1.2 Program Objectives	8
	1.3 Report Format	8
2	LASER DOPPLER SYSTEM DEVELOPMENT	9
	2.1 System Description	9
,	2.2 Winds Aloft Sensing	21
3	DATA PROCESSING FOR WIND MEASUREMENT	31
	3.1 Description of LDV Software System	31
	3.2 Data Processing Algorithms for Wind Measurement	39
4	DATA COLLECTION AND ANALYSIS	51
	4.1 Test Description	51
	4.2 Data Presentation	52
	4.3 Data Analysis	59
5	CONCLUSIONS AND RECOMMENDATIONS	79
6	REFERENCES	81
Appendix	ces	
A	Sample LDV Signatures for Operation in the VAD Mode at Otis AFB, Massachusetts — September 1976	A-1
В	Tabular Data for Wind Measured at Otis AFB, Massachusetts, in Fog Conditions During September 1976	B-1
С	Tabular Data for Wind Measured in Low Cloud Conditions at Lockheed Missiles & Space Company, Huntsville, Alabama, on 7 December 1976	C-1

Section 1 INTRODUCTION AND SUMMARY

1.1 BACKGROUND

Significant effort is currently being devoted to development of instrumentation to remotely sense atmospheric flow phenomena. Some of the avenues being pursued are active and passive acoustic sensors, optical sensors, and radio methods. A useful survey of such methods is presented in Ref. 1. Two advantages of remote sensors are that flow conditions can be ascertained in regions of space where it would not be convenient to locate instrumentation hardware, and no interference with the flow at the point of interest is introduced by their use. The laser Doppler velocimeter (LDV) is a particularly attractive device for remote sensing of atmospheric phenomena. In the LDV system, the laser radiation backscattered by moving particulates in the atmosphere is used to determine the velocity of the flow. Since it is possible to direct the laser focal volume at a selected sequence of points in space, data from a scanning LDV system can be used to determine the velocity field rapidly and over a range of altitudes. A CO2 laser Doppler velocimeter system has the following advantages over other remote sensing techniques: (1) the position of the volume within which velocity is sensed can be varied with ease as only optic pointing and focusing operations are involved; (2) the ambient aerosol provides a sufficient scattering target; and (3) the sensing mechanism is non-mechanical which results in the potential for a high frequency turbulence sensor.

The feasibility of using a laser Doppler velocimeter (LDV) system for the remote sensing of low altitude winds and for the detection and tracking of aircraft wake vortices has been demonstrated (Refs. 2 through 6). The particular application for which the test described herein was conducted is the measurement of wind in fog. The accurate measurement of wind in fog is necessary for successful application of fog dispersal systems to dissipate fog at military bases. The accurate measurement of low speed wind is particularly important.

1.2 PROGRAM OBJECTIVES

The primary objective of the test was to verify the ability of the LDV to measure low speed winds in both advection fog and radiation fog. It was also desired to define particular potential system or operating modifications which could be employed to improve low speed wind measurement capability in a system specifically designed for such purposes. An adjunct objective was an evaluation of the feasibility of measuring visibility with the LDV by measuring the attenuation of the laser signal. The results of that feasibility evaluation are not reported herein. However, the adjunct purpose of the test is discussed because it affected the manner in which the wind measurement data were taken.

1.3 REPORT FORMAT

A brief description of laser Doppler velocimetry and the Lockheed-Huntsville Mobile Atmospheric Unit is presented in Section 2. Section 3 contains a description of the mathematical algorithms used to measure winds. The tests conducted at the Air Force Geophysics Laboratory Test Site at Otis AFB, Massachusetts are described in Section 4 with a presentation and discussion of results.

Section 2 LASER DOPPLER SYSTEM DEVELOPMENT

2.1 SYSTEM DESCRIPTION

An LDV wind/vortex sensor senses air movement by measurement of the Doppler frequency shift of laser radiation backscattered by the atmospheric aerosol. An instrument must incorporate means to transmit the laser adiation to the region of interest, collect the radiation scattered from the atmospheric aerosol and to photomix the scattered radiation and a portion of the transmitted beam on a photodetector. The difference between the transmitted frequency and the returned frequency is the Doppler shift frequency. The Doppler frequency shift signal is generated at the photodetector and is translatable into an along-optic axis wind velocity component using appropriate electronics. The magnitude of the Doppler shift, Δf , is given by the equation

 $\Delta f = \frac{2}{\lambda} |\vec{\mathbf{v}}| \cos \theta$

where

 $|\vec{V}|$ = the velocity vector in the region being sensed

 λ = the laser radiation wavelength, and

 θ = the angle subtended by the velocity vector and the optic system line of sight.

A Doppler shift of 188 MHz results per m/sec of line-of-sight velocity component. Thus measurement of the Doppler shift frequency, Δf , yields directly the line-of-sight velocity component $|\vec{\nabla}|\cos\theta$. Some typical advantages of the laser Doppler method are: (1) the Doppler shift is a direct absolute measure of the velocity (for example, the hot wire yields velocity via a cooling effect on the wire), (2) the ease with which the position of the sensing volume can be varied (optics pointing and focusing operations only being involved); (3) the ambient aerosol provides sufficient scattering, thus enabling operation

in "clear air" conditions; and (4) the ambient aerosol tracer has a small inertia and responds quickly to variations in airspeed and is thus a good turbulence indicator.

A useful instrument must also incorporate means of scanning the system's sensing volume in the desired manner and to also effect the required signal processing, on-line read-out and permanent recording requirements.

The hardware implementation of the field laser Doppler unit utilized during this investigation is discussed in the following subsections. The overall configuration is summarized in Fig. 2-1.

2.1.1 Basic LDV Optical System

The optical system is of a monostatic design and utilizes a continuous wave laser. This arrangement depends on focusing the transmitter telescope at the location of interest for its spatial resolution property. Details of the optical arrangement are shown in Fig. 2-2.

Specifically, a horizontally polarized, 20-watt, continuous wave CO₂ laser beam (10.6 micron wavelength) emerges from the laser (1) and is deflected 90 degrees by a mirror (3). The approximately 6 mm diameter beam then passes through a Brewster window (4) and a CdS quarter waveplate (5) which converts it to circular polarization. The beam impinges on the secondary mirror (6) and is expanded and reflected into the primary mirror (30 cm diameter) (7) and then focused out into the atmosphere. A small portion of the original laser beam is reflected by the secondary mirror and the Brewster window (4) and is used as a reference frequency on the photodetector (10). Energy scattered by aerosols, at the focal volume (8) is collected by the primary mirror (7), collimated by the secondary (6), and passed through the quarter waveplate (5). The quarter waveplate changes the polarization of the aerosol backscattered radiation from circular to vertical linear polarization. The vertically polarized beam is approximately

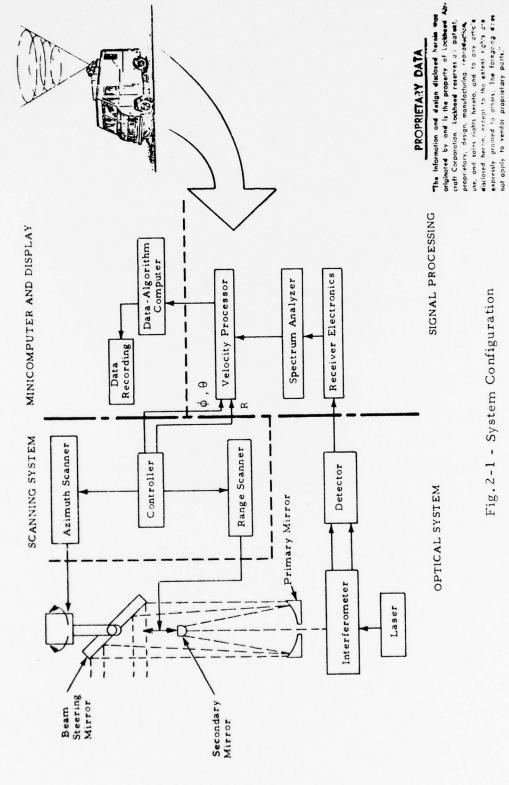


Fig. 2-1 - System Configuration

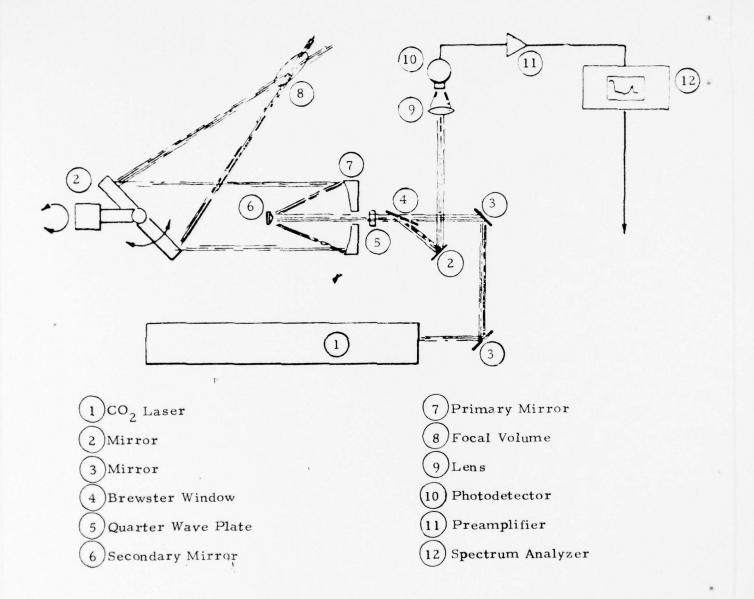


Fig. 2-2 - Optical Component Configuration of the Lockheed LDV

78% reflected off the Brewster window 4. After passing through the collecting lens 9 the two beams are photomixed on the detector 10 in a heterodyne configuration. The electrical output of the detector 10 is amplified 11 with a 5 MHz bandwidth, 20 dB gain low noise type preamplifier and fed into a spectrum analyzer 12.

2.1.2 Optic Scanning System

In order to provide the flexibility required to operate the various required modes, a scanning arrangement as shown in Fig. 2-3 is utilized. The required modes of operation include vortex tracking (not required for the measurements described in this document) and velocity azimuth display (VAD) for measurement of atmospheric wind. The mirror assembly, AB, can be rotated about the vertical axis for scanning in azimuth necessary for the VAD (also called conical scan mode of operation). Mirror A is adjusted to control the elevation angle of the beam, thus controlling the cone angle of the conical scan. The scanning hardware as deployed on the mobile van is shown in Fig. 2-4.

Range scanning of the system's focal volume is accomplished by varying the distance between the telescope secondary mirror, E, and the primary mirror, D. This is effected by varying the position of the mirror, E, in a controlled manner by an electric motor/optical encoder combination.

The operator inputs for the scanning system are made through a control panel incorporating thumbswitch controls and LED monitors. The system's scan capabilities is summarized in Table 2-1 and Fig. 2-5, respectively.

2.1.3 Signal Processing System

The Doppler frequency shift of the photodetector output is ascertained through use of a sampled spectrum analyzer which provides frequency spectra (intensity of returned signal as a function of Doppler shift) at a rate of 70 signatures per second. A typical Doppler wind signature is shown in Fig. 2-6.

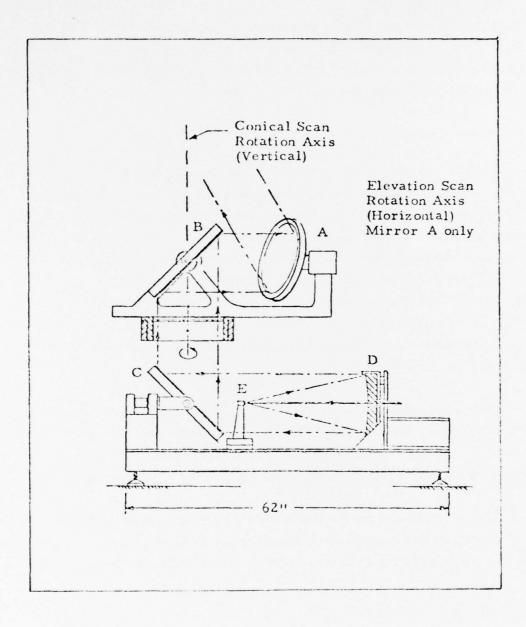


Fig. 2-3 - Schematic of Scan Equipment Added to LDV

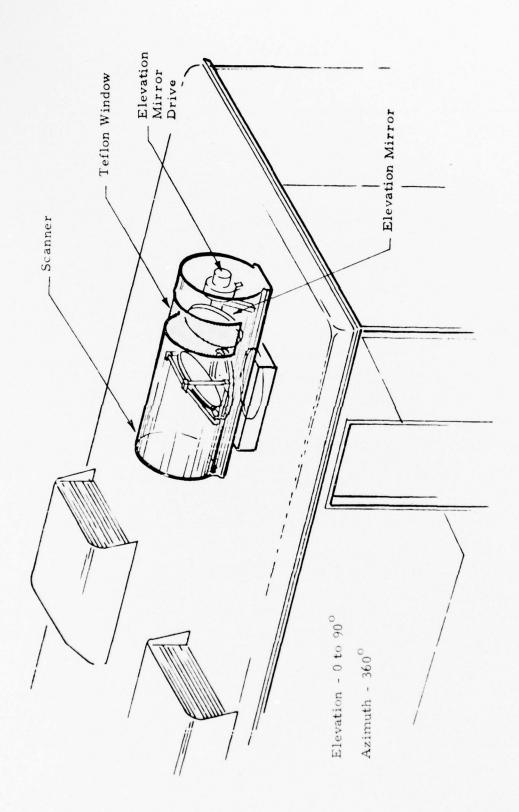


Fig. 2-4 - Multimode Scanner

Table 2-1 SCAN CAPABILITIES

RANGE Maximum Limit: 100 to 800 m

Minimum Limit: 16 to 650 m

Scan Frequency: 0.1 to 6.9 Hz

ELEVATION Maximum Limit: 10 to 90 deg

Minimum Limit: 0 to 90 deg

Hard Limit: 3 deg with Override

Scan Frequency: 0.1 to 0.5 Hz

VAD MODE Measurement Altitude: 10 to 640 m

Measurement Time/Altitude: 5 sec

Sample Rate: 1 to 7 Cycles

Number of Altitudes: 8

MULTIMODE Elevation Coverage: 3 to 90 deg Upwind and

Downwind

Scan Plane Azimuth: 360 deg

Vertical Line Scan: 16 to 640 m

Overhead Arc Scan: 90 deg Coverage

ACCURACY Range: 0.5 m at 500 ft

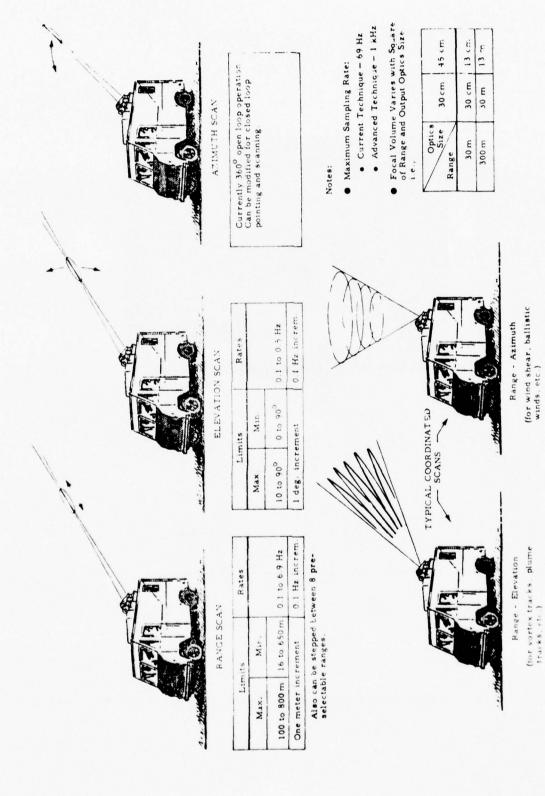


Fig. 2-5 - Scan Capabilities of LDV

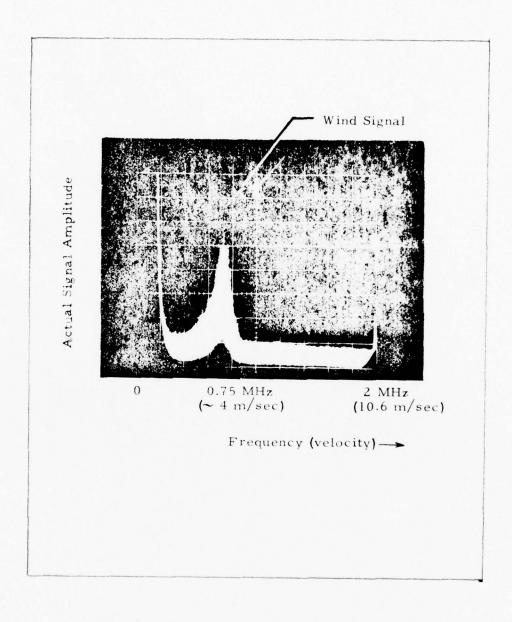
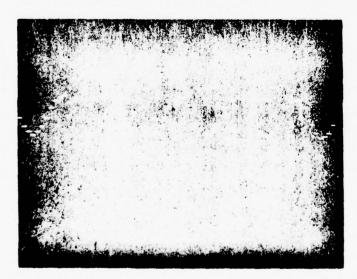


Fig. 2-6 - Typical LDV Wind Signature as Displayed by a Spectrum Analyzer

To yield a line-of-sight velocity estimate, a voltage is made available which has the same time behavior as the Doppler shift, f_d, as given by the peak of the spectrum.

The implementation of this technique is, in essence, a recursive comparison method. The spectrum analyzer scan is driven by a sawtooth voltage derived from a D/A converter, the input to which is counter clocked at a constant rate, hence the digital number output of the counter represents frequency on a linear scale. At each new count, the spectrum analyzer output is converted to a digital representation by an A/D converter, and the binary number representing the current sample is compared with that obtained on the previous count. If the current one is the larger of the two, it is saved by storing in a latch, along with the binary number representing its frequency; if it is smaller, the previous one is retained until the next comparison. This process is continued for the entire sweep. It is evident that the number remaining in the frequency store latch, when the sweep is completed, corresponds to the highest signal power observed, i.e., the peak of the spectrum. At the end of each sweep, the new peak frequency found replaces that obtained on the previous sweep. An example of its output is shown in Fig. 2-7 for the case of



f_m = 5 Hz Sine Wave

Oscilloscope Data Horiz.=.l sec/div Vert. = l V/div

Fig. 2-7 - Output of Signal Processor for FM Modulated Input

an FM signal of center frequency 2.0 MHz (f_0) modulated to ± 200 kHz about f_0 at a 5 Hz rate sinusoidally.

A provision is included for tracking single sideband suppressed carrier signals, with an identification of upper or lower sideband such that when used in conjunction with an acousto-optic modulator the unit can discriminate the sign of the Doppler shift. The signal feedthrough at the translated frequency can also be discriminated against digitally, thus eliminating the need for a "notch filter."

The raw spectral information (output of the spectrum analyzer is also made available to the Systems Engineering Laboratories (SEL) 810A data logging minicomputer which is programmed to generate its own estimate of the spectral peak.

2.1.4 Data Recording and Display

Primary: The primary data gathering function is performed by an SEL 810A general purpose minicomputer. Data gathering by the Mobile Atmospheric Unit is formatted by the computer software and stored on magnetic tape for subsequent processing on the Univac 1108. The SEL 7-track tape control and magnetic tape units allow digital recording of data at 800 bpi at 45 ips, which recording density is common to the Univac 1108 I/O system. The data logged by the computer includes:

- All scan volume location parameters
- "Mode of operation" identifier
- The instantaneous line-of-sight velocity information
- The Doppler spectrum peak strength
- Full spectrum intensity and frequency information (optical)
- · A data quality identifier.

Properties of the Doppler spectrum, namely, the amplitude and frequency corresponding to the spectral peak are obtained as a result of on-line

computer processing except for the frequency which is <u>also</u> obtained by the spectral peak locator (velocity processor) discussed previously. The latter allows some flexibility for on-line operator displays (see below).

Secondary: The velocity processor output estimate of the instantaneous line-of-sight velocity, updated at a 70 Hz rate, is available in analog format which can be recorded directly on a strip chart recorder, an option which is extremely useful during the VAD mode of operation for monitoring the characteristic profile.

Some overall views of the mobile unit hardware as utilized during this program are shown in Figs. 2-8 through 2-11.

2.2 WINDS ALOFT SENSING

Using the basic system outlined previously it is possible, by scanning operations, to determine the three-component wind field at any specified altitude between 50 and 2000 feet. The scanning method employed is commonly referred to as the velocity azimuth display (VAD) technique which was first utilized by Lhermitte and Atlas in conjunction with a microwave radar.

The telescope is focused at the altitude of interest, the beam being directed at a zenith angle, β . The beam is then scanned in azimuth, thus tracing out a circle at the selected altitude (Fig.2-12).

The instantaneous line-of-sight component of velocity within the sensing volume as measured by the LDV, v_r , is given by

$$v_r = v_h \sin\beta \cos(\theta - \theta_0) + w \cos\beta$$

 v_h and θ_o , respectively, being the speed and direction of the horizontal wind motion and w the vertical motion at the height being sampled. The azimuthal

^{*}Also known as conical scan technique because of beam scanning configuration.



Fig. 2-8 - MAU Monitoring Wake Vortex Generated by L-1011 at Huntsville Airport

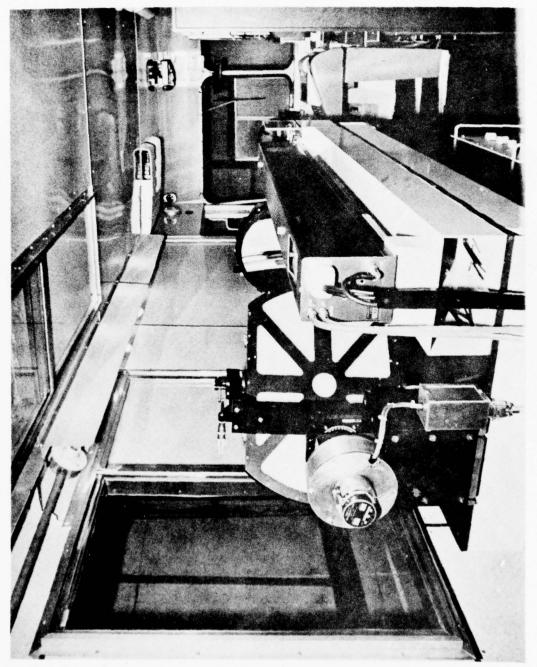


Fig. 2-9 - Interior View of MAU Looking Forward (Depicted in foreground is elevation scanning mirror on left and laser on right.)

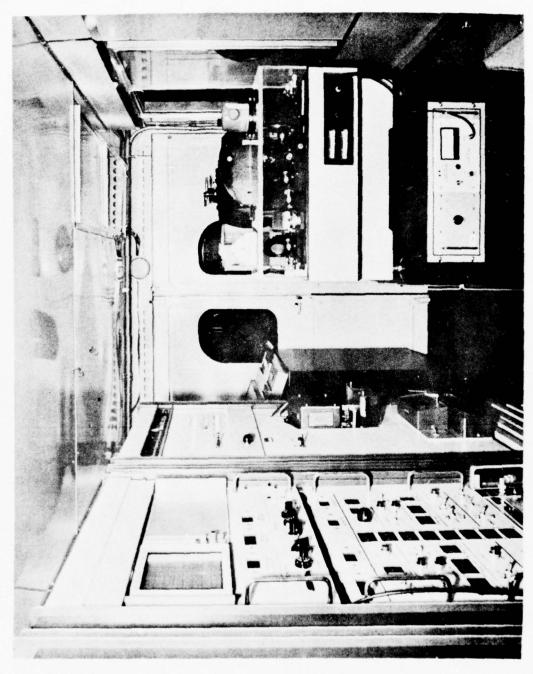


Fig. 2-10 - Interior View of MAU Depicting Display and Scanner Controls in First Rack, Computer in Second Rack, Digital Tape Unit Aft and Optics Package on Right

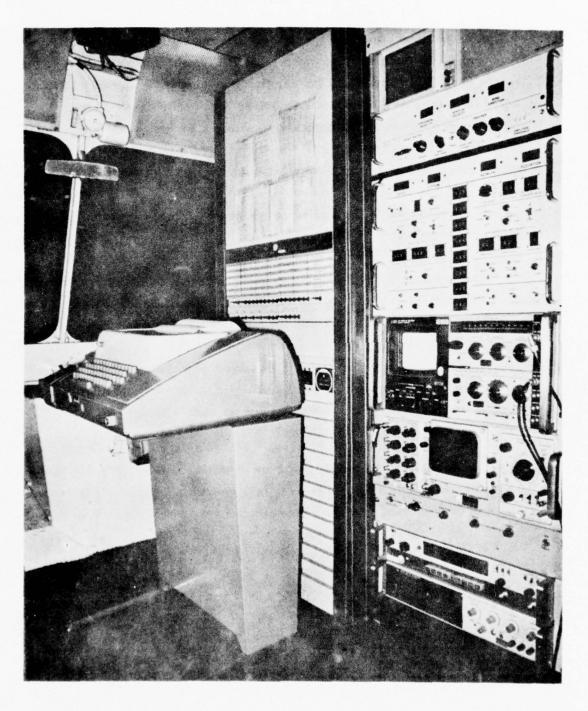


Fig.2-11 - Computer Mainframe Teletype and LDV Electronics

dependence of v_r is sufficient to yield the horizontal speed and direction and vertical component of velocity, respectively.

In the present mode of operation, the system is unable to distinguish between positive and negative values of $\mathbf{v_r}$. Therefore, it is the absolute value of $\mathbf{v_r}$ ($|\mathbf{v_r}|$) that is sensed. This results in a signal as shown in Fig.2-13 instead of the sinusoidal signal as shown in Fig.2-12. This results in an ambiguity of 180 deg in the wind direction since it is uncertain which peak in Fig.2-13 represents looking into the wind. In practice, no problem occurs because the operator records approximate wind direction, and the data processing technique can then calculate exact wind direction. This resolves all wind direction ambiguities if the operator's input estimate is within ± 89 deg of the true wind direction.

While operating in the VAD mode the system is capable of measuring winds at n (n = 1 through 8) altitudes (that can be dialed in by using thumbswitches) in sequence over a total time period of 5np sec where

During this investigation n = 2, p = 1 were utilized, thus allowing the measurement of wind at two altitudes every 10 seconds. Alternating between the two altitudes (28m and 43m) was performed for the test duration required.

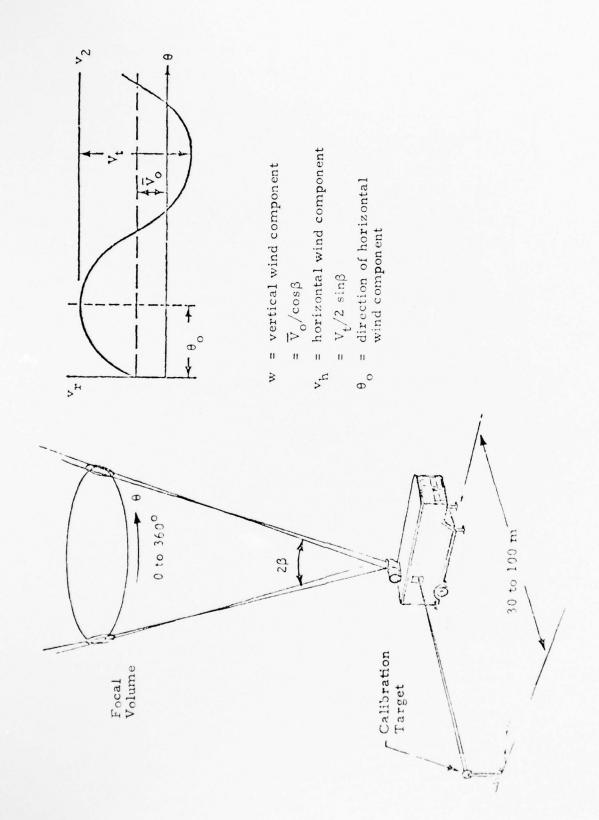


Fig. 2-12 - Principle of VAD Operation

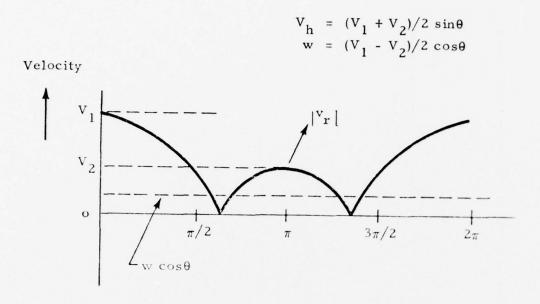


Fig. 2-13 - Azimuth Angle Dependence of Measured Velocity Component

Section 3 DATA PROCESSING FOR WIND MEASUREMENT

Acquisition and processing of the LDV signature is accomplished by means of a compact data handling system developed specifically for the Lockheed-Huntsville MAU. The general elements of the MAU data acquisition and data processing system are shown in Fig. 3-1. The digitized LDV intensity versus frequency signal along with its coordinates in space is fed into the SEL 810 minicomputer. Reprocessing of the LDV signal is carried out on the minicomputer utilizing on-line computer programs written in SEL machine language. Information from the SEL 810 is stored on magnetic tape and is used as an input to the off-line processing algorithms. Off-line processing of the LDV signal is carried out on a Univac 1108 computer with programs written in FORTRAN language and using card inputs with information from the logs to supplement the data. The flow of data from the MAU is sketched in Fig. 3-2 showing both the on-line and off-line data processing routines. Online manipulation of the data is carried out by the SEL Data Logger program. The off-line processing is carried out by the VAD and Vortex Track program. The final output consists of printouts and plots. A description of the data logger, and the VAD program and their operational characteristics is given in the following sections.

3.1 DESCRIPTION OF LDV SOFTWARE SYSTEM

Data acquisition in the Mobile Atmospheric Unit is carried out by the SEL Data Logger program. A sweeping spectrum analyzer is used to detect the Doppler shift frequency. A diagram of the output of the spectrum analyzer is shown in Fig. 3-3. The output of the spectrum analyzer is the value of signal intensity for each of one hundred frequency bands spanning the entire frequency scale. The data logger on the SEL computer records the signal intensity for each frequency band for which the Doppler frequency shift exceeds the velocity

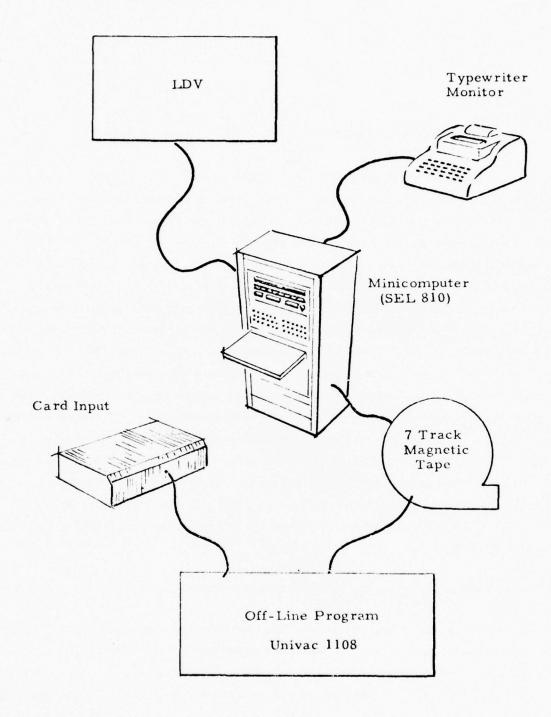


Fig. 3-1 - General Elements of MAU Data Acquisition and Data Processing System

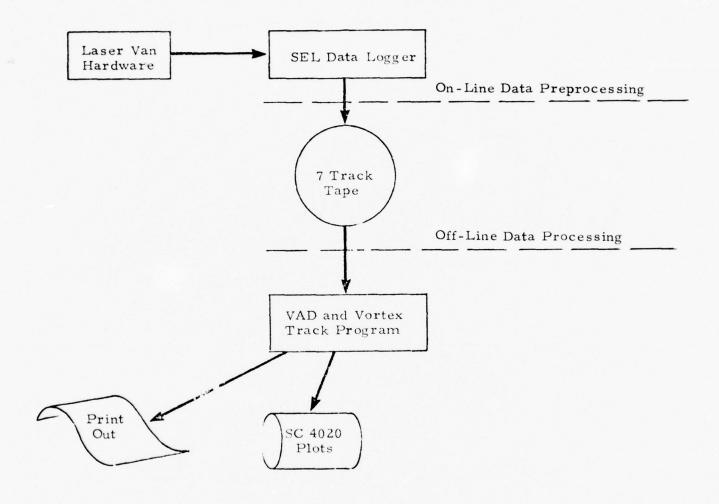


Fig. 3-2 - Data Flow from Mobile Atmospheric Unit

V_{pk} = Highest velocity detectable above amplitude threshold

V_{ms} = Velocity corresponding to maximum signal intensity

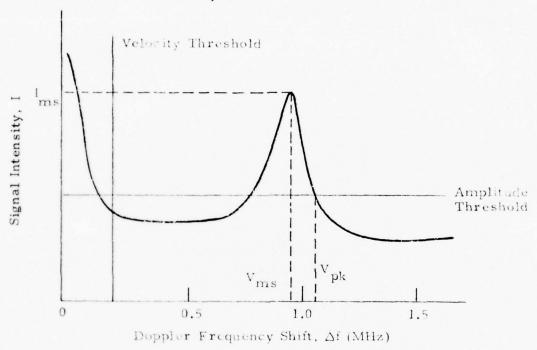


Fig. 3-3 - Typical Spectrum Analyzer Output in VAD Scan

threshold and the signal intensity exceeds the amplitude threshold. This data is stored on magnetic tape for off-line processing. A flow diagram of the data logger is shown in Fig. 3-4.

An off-line conversion program identifies the frequency band with the maximum amplitude LDV signal. This program saves the maximum amplitude LDV signal, I_{ms} , and its corresponding frequency, V_{ms} , which is above both the amplitude and frequency thresholds. The definition of I_{ms} and V_{ms} and the shape of the characteristic LDV spectrum is shown in Fig. 3-3. It can be seen that V_{ms} is the characteristic velocity associated with the flow phenomenon. The output from the off-line conversion program consists of V_{ms} as a function of time and spatial coordinates of the sensing volume. From the output of this program the wake vortex velocity field or wind field can be reconstructed using an additional off-line processing routine.

The two-step process used to generate $V_{\rm ms}$ as a function of time and space was necessitated by the adjunct purpose of relating laser attenuation to visibility. The output tape of the data logger is to be used for the data analysis of that study. In the more usual situation of wind measurement (i.e., when laser attenuation data are not needed) the two steps are accomplished in a onestep process using the SEL 810 computer. The output of the SEL computer in that case is identical with that of the off-line conversion program described above. The flow chart for this data logger is shown in Fig. 3-5.

Final processing of the LDV measurements is carried out by the VAD and Vortex Track program. A macro flow chart of the VAD and Vortex Track program is shown in Fig. 3-6. The VAD processing for wind measurement and vortex tracking algorithm are contained in the same program. Vortex tracking was not used in this test. In this off-line program the array of V max values which is a function of time and space is processed to yield the three-dimensional wind field (VAD mode) or the aircraft wake vortex trajectories (vortex mode). The processing of the VAD measurements involves the computation of the u, v, w wind components from the characteristic sinusoidal

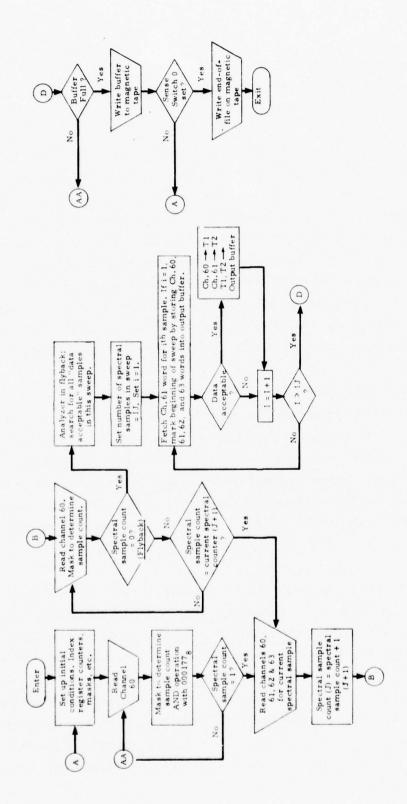


Fig. 3-4 - Full Spectrum Data Logger Macro Flow Chart

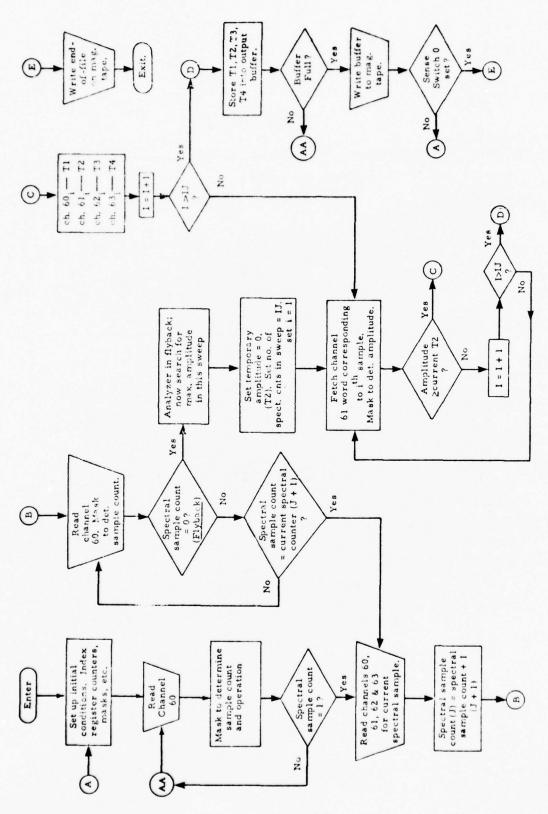


Fig. 3-5 - Data Logger Macro Flow Chart

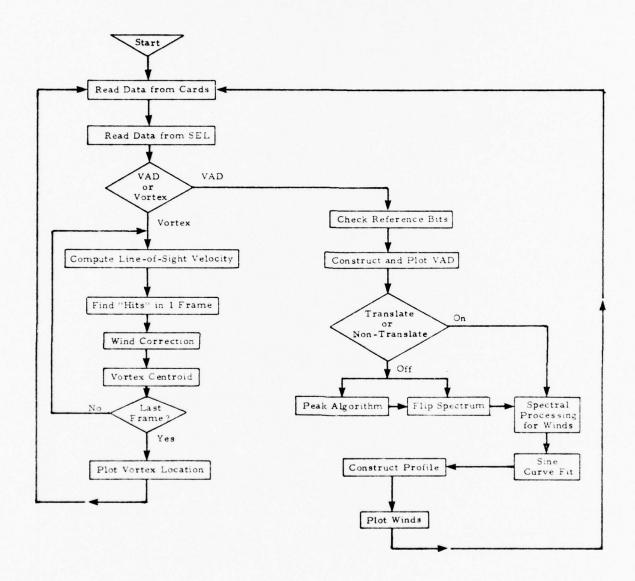


Fig. 3-6 - Macro Flow Chart of VAD and Vortex Program

VAD LDV signature discussed earlier in Section 2 and is described in more detail in Ref. 5. The program is geared to handle both the translated and non-translated LDV signal. A translated signal is provided when the LDV system includes a frequency translator, which distinguishes between positive and negative values of line-of-sight velocity. A non-translated signal provides only the absolute value of line-of-sight velocity as shown in Fig. 2-13. However, during the course of this research effort all of the data acquisition and data processing was done in the non-translate mode. Three basic techniques have been implemented to compute the three-dimensional wind components as follows: (1) a peak algorithm where the magnitude and location of the peak signal in the sinusoidal LDV VAD signature is used to compute the velocity components; (2) a spectral processing for the winds using the derectified signal; and (3) a sine curve fit. The final output is a plot (and printout) of the u, v and w velocity components as a function of altitude and time.

3.2 DATA PROCESSING ALGORITHMS FOR WIND MEASUREMENT

Lockheed-Huntsville has developed three algorithms for calculating the mean wind speed and direction from the VAD signature. For each of these algorithms, mean wind and direction is calculated for each 5 second VAD sweep. Standard deviations of wind speed and direction can be calculated from multiple VAD sweeps. The data output of the LDV system operating in the VAD mode are line-of-sight velocities measured at a selected number (usually 350 in the current Lockheed system) of distinct points around the VAD cone. We recall that the line-of-sight velocity signature is theoretically sinusoidal in the VAD mode (cf., Fig. 2-12).

For all of the processing algorithms, preprocessing of the data occurs; this preprocessing includes:

- 1. Save line-of-sight velocities for one rotation of scanner
- 2. If two or more rotations occur at the same altitude, average with previous rotations
- Assign azimuth angle to each point (assuming constant rotation rate)

- 4. Edit points to eliminate spurious points
- 5. Plot line-of-sight velocity versus azimuth angle.

The edit criterion for the elimination of spurious points is that the ith point is eliminated if

$$|v_{r,i} - v_{r,i+1}| > .2 v_{r,i+1}$$

and

$$|v_{r,i} - v_{r,i-1}| > .2 v_{r,i-1}$$

A sample plot of unedited line-of-sight velocity versus azimuth angle is shown in Fig. 3-7.

3.2.1 Peak Algorithm

For the calculation of wind velocity by the peak algorithm, the calculation procedure is

- 1. Filter data with an n point moving average
- 2. Identify the two peak velocity points, V_{p1} and V_{p2} that occur at a minimum of 90 deg apart
- 3. Compute horizontal component of wind velocity

$$V_{h} = \frac{V_{p1} + V_{p2}}{2 \sin \beta}$$

- 4. Compute horizontal wind angle with help of estimated wind direction
- 5. Compute vertical component of wind velocity

$$w = \frac{V_{p1} - V_{p2}}{2 \cos \beta}$$

Derectify VAD signal if no translator is present and plot derectified signal

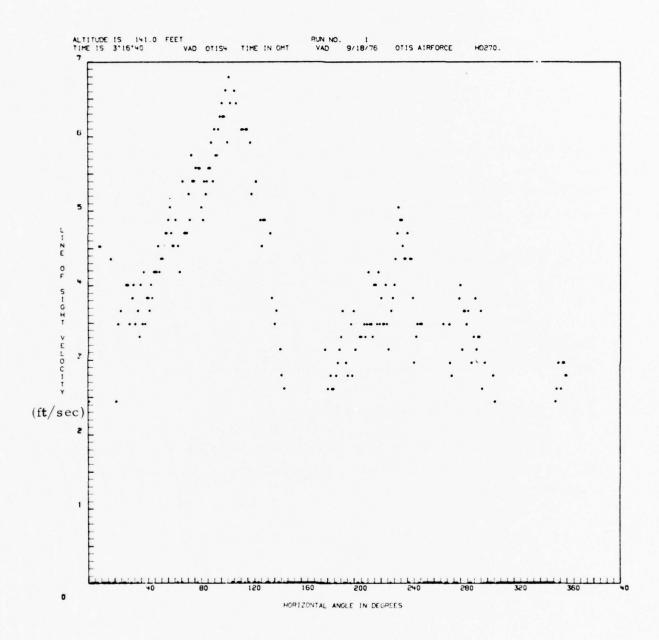


Fig. 3-7 - Sample Output Plot from the VAD and Vortex Track Program Operating in the VAD Mode

The individual data points are filtered with an n point moving average filter (n is usually 21). Thus, each line-of-sight point is filtered by

$$\overline{V}_{r,i} = \left[V_{r,i-\frac{n-1}{2}} + \dots + V_{r,i-1} + V_{r,i} + V_{r,i+1} + \dots + V_{r,i+\frac{n-1}{2}} \right] / n$$

where $\overline{V}_{r,i}$ is the filtered value of line-of-sight velocity to be used in further calculations. A plot of the filtered line-of-sight velocities for a 21 point filter is shown in Fig. 3-8. Additional samples of the LDV signature (including raw data, filtered data, and derectified data) are presented in Appendix A.

When the LDV data are measured, an approximation of the wind angle is recorded. The calculated wind angle is the azimuth angle of the peak which is closer to the estimated wind angle. The wind angle plus 90 deg is the angle at which the line-of-sight velocity is theoretically zero. This angle is used for the derectification of the line-of-sight signal. A plot of the derectified (edited but unfiltered) line-of-sight velocity is presented in Fig. 3-9.

3.2.2 Fourier Coefficient Algorithm

The Fourier coefficient algorithm (or spectral algorithm) computes the fundamental harmonic of the line-of-sight velocity. The Fourier series for a generalized periodic function is

$$f(x) = \frac{a_0}{2} + \sum_{n=1}^{\infty} (a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L})$$

where the Fourier coefficients are given by

$$a_n = \frac{2}{L} \sum_{i=1}^{L} V_i \cos(\frac{2\pi i n}{L})$$

$$b_{n} = \frac{2}{L} \sum_{i=1}^{L} V_{i} \sin(\frac{2\pi i n}{L})$$

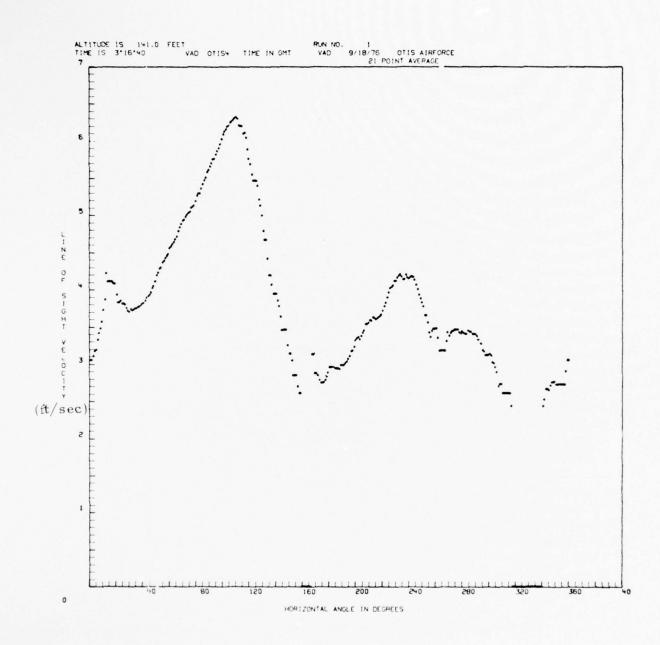


Fig. 3-8 - Filtered Line-of-Sight Velocity for VAD Mode

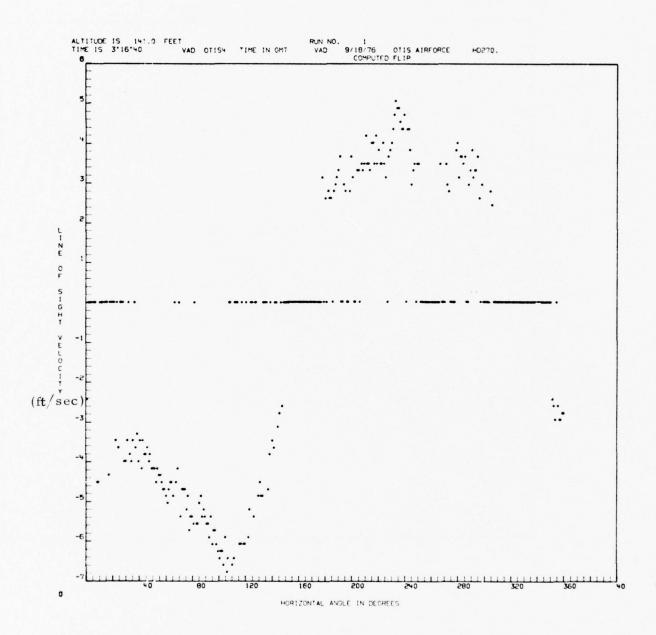


Fig. 3-9 - Derectified Line-of-Sight Velocity for VAD Mode

where the L discrete points are uniformly spaced between 0 and 2π and V_i is the line-of-sight velocity for the ith point in the scan. For the calculation of the three wind components it is necessary to calculate only a_0 , a_1 , and b_1 . However, the second and third harmonics (i.e., n=2 and n=3) are also calculated as an indication of the nonuniformity of the wind. A correction factor must be applied to compensate for the absence of data points which lie below the velocity threshold. Although the line-of-sight signature in the VAD mode is theoretically sinusoidal, the existence of the velocity threshold causes the signature to appear as shown in Fig. 3-10. For the purposes of deriving the correction factor, the origin is chosen so

$$v_r = \frac{a_0}{2} + b_1 \sin\theta$$

In Fourier analysis $a_0/2$ is the dc component.

If the vertical component of velocity is small compared with the magnitude of the velocity threshold, the angle for which the signature is zero is $Z\pi/2$ as shown in Fig. 3-10. The parameter, Z, is the ratio of zero points to total points in the VAD scan. Let a_0^* and b_1^* be the values of the Fourier coefficients calculated from the line-of-sight velocity signature. The integral form of the equations for Fourier coefficients is used. For the theoretical velocity signature,

$$a_0^* = 1/\pi \int_0^{2\pi} (a_0/2 + b_1 \sin \theta) d\theta = a_0$$

However for the actual velocity signature

$$\mathbf{a}_{o}^{*} = 1/\pi \left[\int_{\mathbf{Z}\pi/2}^{\pi - \mathbf{Z}\pi/2} (\mathbf{a}_{o}/2 + \mathbf{b}_{1} \sin \theta) \, \mathrm{d}\theta + \int_{\pi + \mathbf{Z}\pi/2}^{2\pi - \mathbf{Z}\pi/2} (\mathbf{a}_{o}/2 + \mathbf{b}_{1} \sin \tilde{\theta}) \, \mathrm{d}\theta \right] = \mathbf{a}_{o}(1 - \mathbf{Z})$$

Therefore a correction factor of 1/(1-Z) must be applied to the calculated value of a_0 .

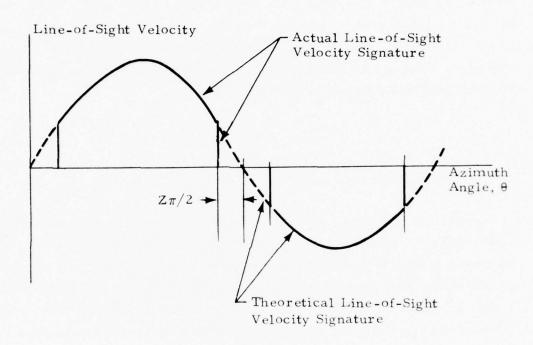


Fig. 3-10 - Line-of-Sight Velocity Signature of VAD

For the sine term, for the theoretical velocity signature

$$b_1^* = 1/\pi \int_0^{2\pi} (a_0/2 + b_1 \sin\theta) \sin\theta d\theta = b_1$$

For the actual velocity signature

$$b_{1}^{*} = 1/\pi \left[\int_{Z\pi/2}^{\pi-Z\pi/2} (ao/2 + b_{1} \sin\theta) \sin\theta \ d\theta + \int_{\pi+Z\pi/2}^{2\pi-Z\pi/2} (a_{0}/2 + b_{1} \sin\theta) \sin\theta \ d\theta \right]$$

$$= b_{1} \left[1 - Z + \frac{\sin Z\pi}{\pi} \right]$$

Therefore, a correction factor $1/[1-Z+(\sin 2\pi)/\pi]$ must be applied to the horizontal wind components.

The calculation procedure for the spectral algorithm is:

 Compute the Fourier coefficients for the first three harmonics (n=1, 2, 3)

$$a_n = 2/L \sum_{i=1}^{L} V_i \cos(2\pi i n/L)$$

$$b_n = 2/L \sum_{i=1}^{L} V_i \sin(2\pi i n/L)$$

2. Compute corrected fundamental harmonic

Corrected Value =
$$\frac{1}{1-Z+(\sin 2\pi)/\pi}$$
 * Calculated Fundamental

3. Compute vertical wind correction

Corrected Value =
$$\frac{1}{1-Z}$$
 * Calculated Value

4. Compute horizontal velocity

$$V_{h} = \frac{\sqrt{a_{1}^{2} + b_{1}^{2}}}{\sin\beta}$$

5. Compute horizontal angle

$$Angle_h = Atan(b_1/a_1)$$

6. Compute vertical wind velocity

$$w = \frac{-a_0}{2 \cos \beta}$$

3.2.3 Sine Curve Fit Technique

The line-of-sight velocity signature is sinusoidal for a uniform wind. Therefore, we find the best sinusoidal wave which fits the data in a least squares sense. Therefore we wish to minimize

$$\sum (V_i - C - A \cos \theta_i - B \sin \theta_i)^2$$

where V_i is the line-of-sight velocity (derectified) at point i, θ_i is azimuth at point i. Thus we obtain A,B, and C by

$$\begin{split} & \left[\sum_{i}^{} \cos^{2} \theta_{i} \right] A + \left[\sum_{i}^{} \cos \theta_{i} \sin \theta_{i} \right] B + \left[\sum_{i}^{} \cos \theta_{i} \right] C = \sum_{i}^{} V_{i} \cos \theta_{i} \\ & \left[\sum_{i}^{} \cos \theta_{i} \sin \theta_{i} \right] A + \left[\sum_{i}^{} \sin^{2} \theta_{i} \right] B + \left[\sum_{i}^{} \sin \theta_{i} \right] C = \sum_{i}^{} V_{i} \sin \theta_{i} \\ & \left[\sum_{i}^{} \cos \theta_{i} \right] A + \left[\sum_{i}^{} \sin \theta_{i} \right] B + nC = \sum_{i}^{} V_{i} \end{split}$$

The steps for calculating wind using the least squares algorithm are:

1. Find least squares curve fit for a sine wave to the data

$$Minimum = \sum (V_i - C - A \cos\theta_1 - B \sin\theta_1)^2$$

where

 $Y_{i}^{}$ is line-of-sight velocity at point

 $\boldsymbol{\theta}_i$ is azimuth at point

C, A and B are coefficients to be solved for.

2. Compute horizontal velocity

$$V_h = \frac{\sqrt{A^2 + B^2}}{\sin(\text{cone angle}/2)}$$

3. Compute horizontal angle

$$Angle_h = Atan(B/A)$$

4. Compute vertical wind velocity

$$w = \frac{-C}{\cos(\text{cone angle/2})}$$

Section 4 DATA COLLECTION AND ANALYSIS

In this section the data collection procedure and interpretation of the data are described. Proper interpretation of the data is very important. The Lockheed Mobile Atmospheric Unit was built as an experimental unit for the measurement of atmospheric wind phenomena. At the time of the beginning of the fog tests at Otis AFB, the Lockheed unit had been in operation for approximately ten months. During this time period, much information about the operation of remote sensing systems was gained, and new operating techniques were generated. For example, the least squares sine algorithm was originated because of inaccuracies in the peak and spectral algorithms observed in field tests.

During the field tests, design improvements in both system hardware and software have become apparent, and many of these improvements have been incorporated into LDV systems built for the U.S. Army and the Department of Transportation. Some of these improvements are discussed in this section as an indication of the manner in which data resulting from a system designed for use in a fog dispersal system would differ from the data presented herein.

The data described herein is the first data collected in fog with the laser Doppler velocimeter. As expected, the system performed well. However, certain operational and design improvements could further enhance the quality of the data in a system designed for use in fog. The improvements are discussed in this section.

4.1 TEST DESCRIPTION

The Lockheed Mobile Atmospheric Unit was operational at the Otis AFB test site from 7 September through 30 September 1976. The unit was placed on standby status, and the unit was operated for wind measurement during periods of fog. A diagram of the Otis AFB test site is shown in

Fig. 4-1. For the test, the direction of the towers was assumed to be north. The positive u coordinate was taken as wind from the west, and the positive v component was taken as wind from the south. A table of the days and times on which data were taken is shown in Table 4-1. During the test runs, the altitude at which the VAD scans were made alternated between 30 m and 45 m. Thus, in each minute time period, six scans were made at 30 m and six scans were made at 45 m. Each scan requires five seconds of time.

The brief time breaks in the data are for two reasons. The first was to adjust the laser power for the adjunct purpose of obtaining data on laser attenuation in fog and was unrelated to the primary purpose of the test. The laser power fluctuates slightly with time. In the condition for which wind data only are required, laser power fluctuation is never large enough to be of concern. However, for laser attenuation studies, it was believed that the power should be kept constant.

The second reason for the short interruptions was the removal of moisture condensation from the mirrors in the scanner. In a system designed for operation in fog, a small heater in the scanner would prevent such condensation.

4.2 DATA PRESENTATION

Sample data output are shown in Figs. 4-2 and 4-3. A complete tabular listing of the data measured during the test is presented in Appendix B. The date is the test site date on which the run was initiated. All times are Greenwich Mean Time. The height is the indicated altitude (meters) on the laser focusing system. Before each test run, the laser ranging system is calibrated to assure that the actual altitude of the data is the desired altitude. Thus, an indicated altitude of 28 m corresponds to an actual altitude of 30 m, and an indicated altitude of 43 m corresponds to an actual altitude of 45 m. The data were reduced to give five minute averages beginning at even five minute time periods. Although the run of 16 September started at 09:15:30, the first even five minute time period began at 09:20:00. The following interpretations are placed on each of the columns.

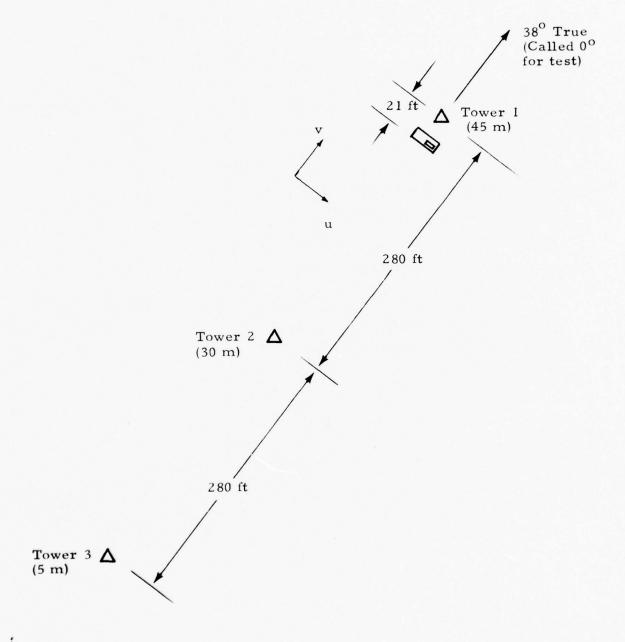


Fig.4-1 - Diagram of Otis AFB Test Site

Table 4-1
DATA COLLECTION AT OTIS AFB

Date	Start	Stop	Threshold Velocity (m/sec)	Approx. Wind Speed (m/sec)	Approx. Wind Direction	Fog Type
9-16-76	9:15:30	10:00:00	0.53	2	140°	Radiation
	10:03:15	10:30:00	0.53	1.5	200°	
	10:31:00	11:00:00	0.53	1.5	200°	
	11:27:20	11:36:45	0.53	1.5	200°	
	11:41:20	12:00:05	0.53	2	240°	
	12:07:00	12:12:00	0.53			
9-18-76	3:16:20	6:08:40	0.79	3 - 5	150°	Advection
	6:16:00	6:51:00	0.79	5	160°	
9-18-76	7:16:00	8:12:00	1.06	7	180°	
9-28-76	00:25:00	00:39:00	1.06			
	00:44:00	03:00:00	1.06			
9-28-76	3:15:17	3:25:47	2.12			
	3:30:00	3:34:45	2.12			
	3:39:00	4:41:00	2.12			

	9:20: 0				•	0	•	22	,							. ,																								
				SP		2	-	2	-					SP		•	• •	• •		•																				
	START TIME			1.	140.3	135.6	131.9	128.4	137.8					ı	140.3	137.9	134.2		134.9																					
•	ST.	111		SPEED	238	230	236	230	228			11.		SPEEU	230	234	234	233	232																					
HU270.		MAVE FIT		3	- 55	7 -	-15	-13	• 1 5			WAVE FIT		*	-22		-17	91-	-								9.9	0 0						1			12.8	1:-	15.7	12.4
J.C.F.		SINE		> (781-	158	-156	0,	9			SINE		>	781-	-170	-166	651-	191-				-	13303		- :	7 .	7 7				:	-	SPEEL		- (0 .	Ξ.	-
OTIS AIMFORCE				> 1	152	153	173	173	150					>	152	152	159	162	160			210 0000	3 4 4 5			- :	: '	2					AVE		-	- 0	- 3		> 0	>
0115		7	4	0.		-	9 1	53	-			-		30	=	15	16	17	11		S	SINC		>		, 5	; ;		35						-	, ;) a	0 1	m -	7
110	ş		0	3	0 0	97	57	100	8,					90	9 1	2.5	53	52	52		DEVIATIONS			>	-	, 4	2 4	77	-		4110NS			5	•	, ,	2 2	2 0	B 4	0,
9/10/76	ONE MINUTE MEANS	COEFFICIENTS	1	131	0	9.55	5.07			CUMULATIVE MEANS		CLENTS		r	136.6	135.1	137.5	130.6	131.4		STANDARD DE			ĭ	3.7	17.6	7.7	13.0	13.7		CUMULATIVE STANDARD DEVIATIONS	5		ĭ	3.,	12.1	7 - 1 - 1		17.7	:
34	7 T T T T T	COEFFI	SPEED		0 0		0 - 0	0	2	MULATI		COEFFICIENTS	2000	2 3	407	203	502	202	201		E STAN	COEFFICIENTS		2	22	8	6	13	1.2		STAND	COEFFICIENTS		6334	22	70	-		0 ~	
- 4		FOURTER	*	13						0		FOURTER			77	50	5	-	•		MINUTE			3	01	9!	91	6 !	5		LATIVE			3	01	13	13	*		
1 1 0 0 1 1		60	>	-15.1	-132	- 124						104	>		201	-	41.	471-	-130		3MC	FOURTER		>	13	47	3.3	4.5	35		משמט	FOURTER		>	13	34	3+	3.7	5.5	
TIME			0	**!	137	147	151	138					7	1 1		7	0 0		147			4		,	22	36	9	- 2	37			u.		2	22	30	26	57	97	
01152		-	1	130.1	136.7	141.2	137.4	145.4				-	7	138			0.00	7.00.	13%.			~		ī	3.9	6.7	12.0	3.8	5.3			-		==	3.6	5.3	7.0	2.0	5.0	
440			SPEEU	734	236	439	436	233					SPEED	- 4	200	653	224		730					SPECE	5	٣	1	.	2					SPELU		7	n	S	5	
		PEAKS		45	25	0.5	53	0.5			3	FAKS			3	3 0	3	2 3	0.6			SX434		3	+	7	.	Λ.	n			PEARS		2	-	S	٥.	2	٦,	
20.			>	-173	-170	781-	711-	-183					>	.173	-171	-174	-174	-176				•		>	=	7.	5.	, ,	2			1			- :	٥.	2	c	0	
.E16HT .			Э	156	191	7	091	145					>	95!	159	155	156	. 5						o .	7!	-	7 -							s ?	,	0	50	53	77	
. E16			Z E	~	~	~	,	s					27.2	~	2	7	,	5							- (, .	7 3		,					z -			٦ :		۲	

Fig. 4-2 - Sample Data Output at 96 ft Altitude

	9:25:0			SP	80	60	•	1	01			SP	•	60	60	•															
	END TIME			1	137.6	137.6	138.6	1.1.	142.5			ī	137.6	137.6	137.9	138.8	134.5														
	- N		FIT	5		269					FIT	SPEED			268					-	9.	-		4.5				9.	•	0.	1.7
HD270.	٠		MAVE FIT	*	- 22	-22	-22	-23	-21		SINE WAVE FIT	3	-23	-23	-22	-2	- 2			ī			-	7			ī			-	- ~
J.			SINE	>	-194	-197	-204	-206	1 9 1 -		SINE	>	161-	961-	-198	-200	**!-		F11	SPEED	2	c	7 .	0 ~		F 1.1	SPLEU	2	3	7	201
IRFOR				2	178	181	181	167	151			Э	178	1.80	180	176			MAVE	1	-	-		- 1		WAVE FIT	3	-	-	-	-~
OTIS AIRFORCE			-	30	7	۰	0	01	٠		-	30	*	12	=	= :	0	SNS	SINE	>	7	2	;	•	S	SINE	>	2	+	2	• •
76		s		07	15	13	=	13	9			20	15	*	13	13	7	DEVIATIONS		2	7	7	m	0 6	UEVIATIONS		0	7	3	٦	15
9/16/76		ONE MINUTE MEANS	IENTS.	I	135.2	133.3	135.4	138.1	145.5	CUMULATIVE MEANS	SIENTS	ī	135.2	134.2	134.7	135.6	137.0	VOARD DE	1 51	ī	2.2	٠.	F . C	6 . v	DAKC CEN	1 51	ī	2.2	3.4	3.4	7.
4 > 0		NE NIN	FOURIER COEFFICIENTS	SPEED	228	245	248	235	222	MULATI	FOURIER COEFFICIENTS	SPEFU		237	740	239	735	HINUTE STANDARD	COEFFICIENTS	SPEED	52	1	•	٠ ٣.	COMULATIVE STANDARD	COEFFICIENTS	SPEED	,			0 0
_	9	0	K I E K	3	54	26	2.8	30	23	5	KIER	3	54	25	26	27	44			3	-	1	t '	n r	LATIV			1.1	6	æ	~ ~
TIME IN GHT			F 0.0	>	191-	-167	-177	-17:	-174		400	>	-161	+ 9 1 -	-164	-164	0/1-	ONE	FOURIER	>	22	1.1	7	7 7	0.400	FOURIER	>	2.2	-	2	1.7
1146				2	160	178	172	151	136			5	160	169	170	167	0 9 1		•	>	15	a	2 .	27			>	15	15	13	13
01152			-	1.	132.6	132.9	132.0	140.5	130.1		-		132.6	132.8	132.6	134.7	135.0		1.	I	7.	1.9	2.7	2.5		-:	r	7.	4.	٠.٠	3.4
CA >				SPEEU	797	997	407	197	542			SPEED	262	101	507	197	097			SPEED	7	~	σ:	0 7			PEEU		•	7	J 3
			PEAKS						2.5		PEAKS			47	1 0	4	7 7		PEAKS	2	2	3	2	1 1		PEAKS		.4	,	,	m I
	;			,	-177	787	*11	007-	-170			>	-111	-178	-174	707.	-183			>	2	1	= :	2 0			>		0	1	1.2
				2	192	65	200	000	-			n	192	195	561	180	0.7			5	1	5	a.	1 7			>	1	S	0	2 0
	100			2 2		7	1	,	v			212	-		•	7	5			Z	-	7	7	run			215		7	٦	* v

Fig. 4-3 - Sample Data Output at 156 ft Altitude

4.2.1 One Minute Means

One minute means were calculated for each of the minutes of the five minute time period. The minutes of the time period are tabulated in the first column. Each of the numbers in this group is an average of the six VAD scans that occur at the given altitude during one minute.

Peaks

The one minute mean u, v and w components of wind as calculated by the peak algorithm are tabulated. The w component is the vertical component and is positive vertically upward. Speeds are given in cm/sec and angles are given in degrees.

The data calculated from the basic VAD data are horizontal wind speed, wind direction, and vertical component of wind velocity. The u and v components are calculated from horizontal wind speed and direction. The speed is the one minute average of the horizontal component of velocity, and "TH" is θ_0 , the direction of the horizontal component of wind. The u and v averages are calculated by averaging the u and v values of the individual VAD scans rather than from averaged values of u and v. Thus

$$u_i = -S_i \sin \theta_{o,i}$$

and

$$v_i = -S_i \cos \theta_{o, i}$$

where the i subscript refers to the individual VAD scans. The average for n scans in the one minute average is

$$\overline{S} = \sum_{i} S_i/n$$

^{*}Because of a processing error (since corrected) the w component should be multiplied by -0.5.

$$\overline{\theta}_{o} = \sum \theta_{o, i}/n$$

$$\overline{u} = \sum u_i/n$$

 $\overline{v} = \sum v_i/n$

It is noted in general that

$$\overline{u} \neq -\overline{S} \sin \overline{\theta}_0$$

$$\overline{v} \neq -\overline{S} \cos \overline{\theta}_0$$

and

and

$$\overline{S} \neq \sqrt{\overline{u}^2 + \overline{v}^2}$$

The same averaging characteristic results from resolving cup and vane anemometer data into components and averaging or when comparing averaged data from cup and vane anemometers with averaged data from propeller anemometers. The characteristic is particularly pronounced in light and variable wind conditions.

Fourier Coefficients*

Results are shown for wind calculations performed using the spectral algorithm. The symbols have the same meaning as for the peaks algorithm. The "2D" is the magnitude of the second harmonic and is the average of $\sqrt{a_2^2 + b_2^2}$ where a_2 is the second Fourier cosine coefficient and b_2 is the second Fourier sine coefficient. Similarly, "3D" is the average of $\sqrt{a_3^2 + b_3^2}$. The magnitude of these numbers is an indication of turbulence with the frequency of the turbulence increasing with the number of the harmonic.

Sine Wave Fit

Results are shown for the least squares sine fit algorithm with similar meanings of the symbols as for the other two algorithms. The "SP" is an indication of the deviation of the data points from a perfect sine fit.

^{*}Because of a processing error (since corrected) the w component should be multiplied by -1.

4.2.2 Cumulative Means

The cumulative means are averages of individual VAD scans taken over the time period indicated. For example, the three minute cumulative mean is the average of the VAD scans taken over the first three minutes of the five minute time period. They are not averages of the one minute means. The two averaging methods would be identical if the number of VAD scans in each one minute average were always identical. The five minute cumulative means are the averages over the five minute time period of interest.

4.2.3 One Minute Standard Deviations

This section lists the standard deviation of each of the variables for each one minute time period. Each standard deviation is the standard deviation of the six VAD scans in the one minute period.

4.2.4 Cumulative Standard Deviations

The cumulative standard deviations are analogous to the standard means. They are the standard deviations of the individual VAD scans taken over the time period indicated. In general, the cumulative averages of the standard deviations are not averages of the one minute means because of the mathematical definition of standard deviation.

4.3 DATA ANALYSIS

Although meteorological tower data are not available for direct comparison with laser measured winds, a discussion of previous wind comparisons with meteorological towers is helpful in the interpretation of the results of this test. Observations about operation in fog are also appropriate.

4.3.1 Comparison of Computational Algorithms

The relative accuracies of the three computational algorithms can be seen by comparison with meteorological data in past tests.

The winds calculated with the three algorithms described in Section 3 are shown in Figs. 4-4 through 4-6 for data measured at the Wave Propagation Laboratory, National Oceanic and Atmospheric Administration, Boulder, Colorado. The winds were measured in March 1976. The sole difference between the three parts of each figure is the data processing algorithm used. Some general observations are that the peak algorithm tends to give mean wind values that are biased slightly high compared to the tower measured mean winds. This is primarily due to temporal variations in the wind at higher frequencies than the fundamental frequency in the VAD signature; thus the peak of the signature (i.e., the fundamental frequency with superimposed higher frequency variations) has a value that is higher than the averaged values. This interpretation is confirmed by the runs for which the greatest deviation above the 45 degree line occur are the runs for which the greatest value of wind standard deviation (measured by the tower) occur. In particular, for the points of Run 9 farthest off the 45 degree line in Figs. 4-5 and 4-6, the standard deviation of wind speed is 1.82 m/sec and 1.75 m/sec, respectively, whereas the standard deviation of wind speed was usually between 0.9 m/sec and 1.4 m/sec.

It is also observed that the spectral algorithm tends to give mean wind values that are biased slightly low compared to the tower measured mean winds. It was observed during the data processing of the Boulder data that the magnitude of the bias is a function of the number of valid line-of-sight velocities obtained during the VAD scan. The bias is insignificant for data where more than 50 valid data points are obtained during each VAD scan. It is noted that a number of data points below this value was obtained only rarely at Table Mountain and that the low number of data points would never occur in air with a larger quantity of natural aerosol than the very clean air of Table Mountain. The least squares sine algorithm seems to present no systematic bias, and the scatter of the data about the 45 degree line is less for the sine algorithm than for the other two processing techniques. A comparison of the peak algorithm and the spectral algorithm with the sine algorithm for the data measured at Otis AFB is shown in Fig. 4-7. In similar figures in the

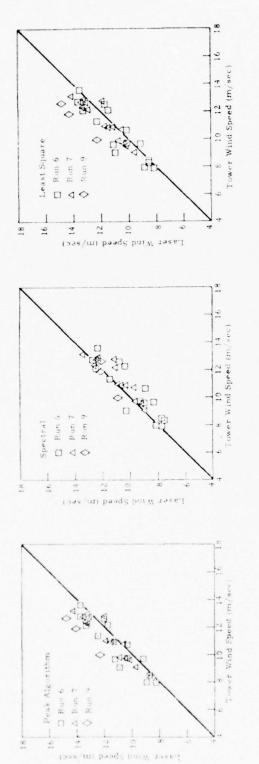


Fig. 4-4 - Comparison of Laser and Tower 16 min Mean Wind Speed at 30 m Altitude

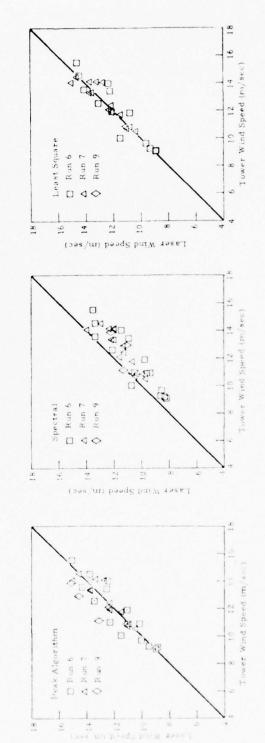


Fig. 4-5 - Comparison of Laser and Tower 16 min Mean Wind Speed at 60 m Altitude

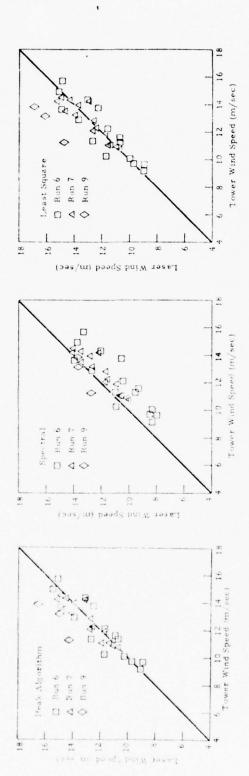


Fig. 4-6 - Comparison of Laser and Tower 16 min Mean Wind Speed at 90 m Altitude

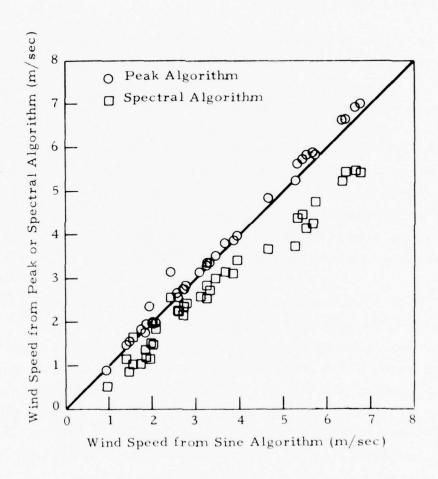


Fig. 4-7 - Comparison of Data Processing Algorithms Measured at Otis AFB

Boulder data (Figs. 4-8 and 4-9) it was observed that the speed calculated by the peak algorithm was almost always greater than that calculated by the sine algorithm. The same observation is valid for the data greater than 4 m/sec at Otis AFB, but for light winds (< 2 m/sec) the peak algorithm often gives a value which is less than that derived from the sine algorithm.

4.3.2 Variations in Fog Density

One of the problems associated with wind measurement in fog is measurement in both fog and clear air. Unfortunately, the magnitude of this problem was not completely anticipated and some data were lost. In fog, for the manner in which the data were taken, the backscattered signal is very large and must be attenuated to avoid going off scale in the spectrum analyzer. With this quantity of attenuation, when the focal volume hits clear air, an adequate signal cannot be obtained. This problem occurs if the data are taken on a linear scale. The Lockheed system also has a logarithmic scale which avoids the problem by displaying and recording the logarithm of the intensity of the return signal. Since the magnitude of the problem was not anticipated, all data during the test were taken in the linear mode.

The problem is illustrated by the data for 18 September. From the magnitude of the wind it is apparent that the fog is an advection fog. Valid data for wind speed on the order of 3 m/sec to 4 m/sec is obtained at both altitudes from 3:20 to 5:20. However, after 5:20 the wind increased to an order of 5 m/sec to 6 m/sec. This would cause the advection fog to lift slightly, providing clearer air at the lower altitude. The data taken at 30 m altitude between 5:20 and 6:50 is therefore somewhat sparse. During the brief interruption from 6:51 to 7:16 the laser power and signal attenuation were adjusted, and valid data were obtained thereafter.

A similar condition is seen in the data of 16 September. The wind speed indicates a radiation fog. Valid data are obtained at the beginning of the run. As the depth of the fog decreased after sunrise, the system began to lose data at the higher altitude. Adjustment of laser power and attenuation at 11:40 restored a good signal at both altitudes.

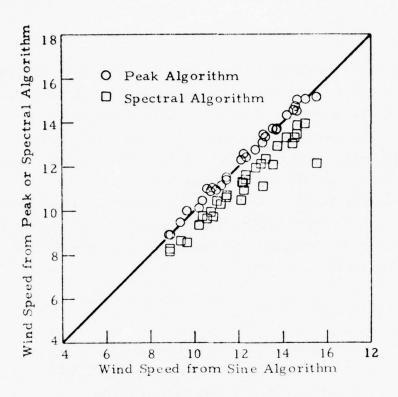


Fig. 4-8 - Comparison of Data Processing Algorithms at 60 m Altitude Measured at Table Mountain, Colorado

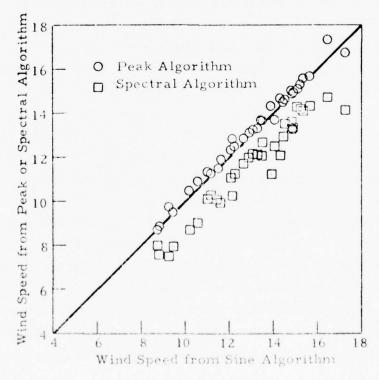


Fig. 4-9 - Comparison of Data Processing Algorithms at 150 m Altitude Measured at Table Mountain, Colorado

As mentioned previously, these adjustments would have been unnecessary if the laser intensity had been measured in the logarithmic scale. In order to verify that an adequate signal could be obtained both in and out of fog conditions, Lockheed-Huntsville made measurements in low cloud conditions at its Huntsville facility on 7 December 1976. The reported meteorological conditions at the Huntsville-Madison County Jetplex (10 miles from the test site) are shown in Table 4-2, and wind conditions are shown in Figs. 4-10 through 4-17. More complete data from this set of measurements are shown in Appendix C. Adequate data were obtained for both in and out of the clouds using the logarithmic scale.

4.3.3 Light and Variable Winds

The existence of light and variable winds presents some unique conditions which must be considered in the data analysis. The first of these is important when comparing the LDV data with propeller anemometer data. For the propeller anemometer data, the wind can fall below the threshold value in one of the component directions. However, because the LDV operates in speed-direction coordinates and then transforms the data into orthogonal coordinates, it has no threshold value in the orthogonal directions. Thus the LDV can indicate values of wind which are below the threshold value of the anemometers. This can affect the averaging over a period of time.

In the mode of LDV operation without a frequency translator, the system is unable to distinguish between positive and negative velocities. Therefore, at the beginning of each run, the operator makes an estimate of wind direction, and the direction is chosen as the angle of the peak of the VAD scan (cf. Figs. 3-7 and 3-8) which lies closest to the estimated wind direction. In practice this causes no problem if the actual wind direction is within ±89 deg of the estimated wind. In all previous applications of the VAD technique, this criterion has been easily met, and no ambiguity has resulted from the system limitation. However, in light and variable winds, the variation in wind direction from the estimated wind direction can occasionally exceed 90 deg for one or more scans in the one minute average. For each scan for which

9:45:19				•	101		*	0,					SP	67		99	08	7.8																		
START TIHE END TIME						338.2										321.3	320.7	320.9																		
HD270.	WAVE FIT		37.5					-57 876			WAVE FIT		W SPEED					-41 850			ī	.7	0.	23.3						ī	.,		2.6	7.5		
	SINE WA	,	- 0	274	195	731	618	989		,	SINE WA		>							F11	SPEED	53	0 :	,	2 2				F17	SPEED		10	. 4	5.7	5	
		:	o !	0/9-	-627	-281	-556	-545					>	-670	-656	-506	-514	-525		MAVE		S	0	97	2	2			WAVE	3	J.		0 0-			
HUNTSVILE	-	:	30	•	-	-	•	13			-		30	•	15	20	17	-	5 2	SINE	>	27	o :	9	0 0	•		5.	SINE	>	27		139	125		
9 S		;	9	20	7.0	35	s	23					20	æ	-	23	20	21	DEVIATIONS		>	41	0	587	0 =	:		1 1 1 0		>	47	. ;	252	227	100	
VAD 12/U7/76	STNIE	:	1	304.5	312.3	338.4	315.2	316.0		CUMBLATIVE MEANS	CIENTS		ĭ	309.2	310.2	321.5	320.5	319.3	STANDARD DE	1 1	Ŧ	0.4	0.	23.5	٥.			CUMULATIVE STANDARD DEVIATIONS	1 51	7			4.6	17.7		:
VAD ME HERE	COEFFICIENTS		SPEED	818	635	623	793	109		HULATI	COEFFICIENTS		SPEED	819	757	104	719	116		COEFFICIENTS	SPEED	59	0	0.	O #			E STAN	COEFFICIENT	SPEFD			1 2 2			
ō	FOURIER		ı	43	16	-3	4.5	8 7		00	FOURIER		3	43	5	31	13	4	MINUTE		*	c c	0	•	0 %	2		LATIV		3	•	•	7.0	, =		,
	400		>	515	424	563	563	209			004		>	515	186	517	524	521	ONE	FOURIER	>	1	0	061	ט ט	0		0100	FOURTER	>			205		000)
			>	-634	694-	861-	-558	764-					>	-634	-579	-426	1 1	-459			>	8.2	٥	961	0 4	0				2	6		211	224	100	•
HREC2	-		ı	324.1	320.2	322.7	324.5	322.8			-		H	124.1	322.8	322.8	323.0	323.0		1	Ŧ	11.2	0.	16.6	• •	0.1			•	1	11.3	7	8.5			•
>			SPEED	169	908	918	650	4					SPEED	8	1 98	84.5	4 7 7	847			SPEED	7 9		11	0 0	0				Speed	1		69	0 4	0 0	•
	PEARS		2	63	252	0 + 1	113	176			PEAKS	,		4	126	132		140		PERKS	Z.	1 9	0	22	0 1	c			PEAKS		0		- 00	1.		3
• 05			,	713	620	642	269	676					>	713	682	999	110	672			>	5.1	0	203	0 9	0				>			9 -	201	2 0	>
			>	-523	-515	-475	671	-31					כ	-523	-520	-502	003-	-503			כ	111	0	-	0 .					3	111		126	0 7	0 0	5
HE 16H			z	-	2		, ,	. 2					Z	-	. ~	. ~	, ,	r .s			z	1	2	~	J U	n				1		- 1	7 -	1 3	7 4	,

Fig. 4-10 - Wind Data Measured at 30m Altitude with Low Clouds

9:45:19	2 4 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		7 15 60 C L 7 7 60 60 60 V				
¥							
START TIME END TIME	32		33 33 34 45 45 45 45 45 45 45 45 45 45 45 45 45				
	SPEED 973 927 867 732 871	F 1.4	SPEED 973 958 921 885		00000		00-05
но270.	100 T T T T T T T T T T T T T T T T T T	WAVE FIT	3 11 11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		3.0 3.0 9.0 9.0 2.3		4 t t t t t t t t t t t t t t t t t t t
ALA.	8 6 6 6 1 1 2 3 9 2 2 2 3 9 2 2 2 3 9 2 2 2 2	SINE	8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11	SPEED 35 0 115 74	-	SPEED 37 80 105
V 11.E A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-536 -510 -302 -326	E A VE	3 0000	3	3 0 0 0 0 0
HUNTSVILE	30	-	30 18 15 26 26	SINE	2777	8. FM F R	2673 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
3 s	77 77 77 77 77 77 77 77 77 77 77 77 77		20 22 17 27 25 19	DEVIATIONS I S	1063	VIAT101	6 6 1 6 5 5 5 0 6 4 8 0 6 5 6 1 6 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6
VAD 12/07/76 ONE HINUTE HEANS	SPEED TH 0 808 324.7 6 816 324.1 3 659 6.9 4 695 352.7 7 823 321.4 CUMULATIVE MEANS	CIENTS	32 1 H H H H H H H H H H H H H H H H H H	A RO	4	ARD DE	1H 52.6 47.3 41.2
NE HINUTE ME	SPEED 808 816 659 695 823	COEFFICIENTS	SPEED 808 810 750 741 761	3	147 147 0 15 0 108	ATIVE STAND	SPEED 147 104 111 102
0	74 9 9 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	OUKIER	TWN TH E		3 W W	LATIV	
	2 0 0 6 - 1 2 0 0 0 8 7 4 4 7 9 9	100	660 500 531 531	FOURIER	V 126 0 109 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CUMUS	235 235 224 197
	14465 1478 1478 187		11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		9 2 0 6 0 6 0 6 0 6 0 6 0 6 0 6 0 6 0 6 0		2 2 2 2 4 5 5 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6
HREC2	332.2 330.8 320.3 305.5 323.8	-	332.2 331.7 327.1 323.5	-	4.8.10.00.00.00.00.00.00.00.00.00.00.00.00.		1H 2.5 10.2 12.7
>	SPEED 947 942 715 889		SPEED 947 945 929 893		PEE0 10 0 33 76		PEE0 10 28 91 91
	8 3 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	PEAKS	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PEAKS	* 67 59 69 69 69 69 69 69 69 69 69 69 69 69 69	4	0 3 3 3 70
š.	8 8 3 7 7 1 1 5 5 1 7 7 1 1 5 5 1 7 7 1 1 5 5 1 7 7 1 1 1 1		637 773 773 714		35		35 123 166 166
	2 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 0 4 0 8		0 3 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
н £ 16н1	Z - N 7 F 0 E		2 - 27 50		Z - NO F 50		Z - 75 F 5

Fig. 4-11 - Wind Data Measured at 45 m Altitude with Low Clouds

																	00.00
							0	NE HIN	ONE MINUTE MEANS	SN					2	201	11:05:4
		PEAKS		-		FOU	FOURIER	COEFFI	COEFFICIENTS		-		SINE	WAVE FIT	-		
	>		SPEED	H	>	>	3	SPEED	ī	20	30	5	>		SPEED	ĭ	9
	989	78	196	316.1	-500	959	27	835	321.7	1 9	8-	-598	176	-54	487	322.6	7
-545	190	101	096	325,3	-523	159	16	922	325.4	•	•	-480	834	-51	296	330.0	33
-740	495	9	894	303.9	-550	361	-33	199	303.5	32	3.2	-746	539	-37	922	305.9	5.0
	818	120	198	340.6	-326	290	8 2	675	331.0	1 9	27	-457	154	-30	882	328.7	7.5
-368	999	515	826	328.9	-332	414	115	152	333.6	54	30	1400	785	-8	882	333.2	Ξ
							0	JHBLATI	CUMBLATIVE MEANS	S							
		PEAKS		-		001	FOURIER		COEFFICIENTS		-		SINE	WAVE FIT			
	>	*	SPEED	Ŧ	>	>	x	SPEED	ī	20	30	>	>	3	SPEED	Ŧ	SP
599-	989	7.8		316.1	-500	959	27	835	321.7	61	1 8	-598	176	-59	487	322.6	7
-625	721	9 9		319.2	-507	069	4.	190	323.0	15	- c	-559	795	156	979	325.1	7 :
1 101	0 1	0 0		113.1	0 7 0 7	100	, ,	1 9 1	3.010	3 .	2.2	100	70.5	4 7 1	0 10		
1960	663	122	006	320.5	-452	592	17	763	321.8	22	24	-553	724	1 1	929	322.8	6 9
						ONE		JTE STA	MINUTE STANDARD DEVIATIONS	EVIATIO	SNO						
		PEAKS		-		FOURTER		COEFFICIENTS		_	SINE	WAVE	F11				
	>	×	SPEED	ī	2	>	*	SPEED	ī	כ	>	3	SPEED	ī			
171	113	54	3.8	12.0	67	504	57	120	12.3	163	5.7	7	54	9.5			
0	0	0	0	0.	0	0	0	0	0.	D	0	0	0	•			
501	47	54	19	6.2	6.9	8.5	28	58	10.3	5.1	36	52	20	3.7			
	0	0	0	0.	0	0	0	0	•	0	0	0	0	•			
24	7 1 4	5	101	33 4	4	47	α-	07	0	80	3.4	44	14	4.4			

Fig. 4-12 - Wind Data Measured at 60 m Altitude with Low Clouds

9.5 8.0 12.1 11.7

* 4 0 7 7 E

57 57 146 133

0 1 1 6 3 1 1 4 5 1 1 4 6 1 1 4 6 1 6 0 1

14 12.3 9.0 13.5 13.7

5PEED 120 99 130 125

204 156 193 172

2 4 4 6 2 2

1000 145

1711128

WAVE FIT

CUMULATIVE STANDARD DEVIATIONS

FUURIER COEFFICIENTS

PEAKS

	9145119																																
	•			SP	55	5 9	1 8	57	55			92			5.5	26	2.6																
	START TIME END TIME			I	327.8	324.1	324.8	330.1	328.0			ĭ	127.	125.1	325.2	326.9	327.0																
	E S		-	SPEED	484	467	929	918	863		-	SPEED		610	962	9 4 6	934																
HD270.			WAVE FIT		-54	-37	-36	-20	-28		WAVE FIT	3			7 7	*	.33			ĭ		12.6	•	9.9	•			ĭ	•	9.2	7.5	7.0	***
ALA.			SINE	>	833	176	760	192	732		SINE		0 3 3	100	786	788	7.80		111	SPEED		38	0	36	0		111	SPEED	0	53	32	38	47
				>	-523	-556	-534	-452	- 457			ם		575-	-542	-512	-504		WAVE	3	c	•	0	=	0		WAVE FIT	3	0	13	01	-	-
HUNTSVILE			-	30	22	92	58	23	56		-	90		3,5	26	25	52	S	SINE	>	c	155	0	4 60	0	2	SINE	>	0	*	9.5	83	7.8
92	U	n		20	34	87	87	27	52			20		,	29	5.6	78	VIATIO		>	c	140	0	7 4	0	DEVIALIONS		>	0	101	88	6 8	2
12/07/1	1	UNE MINUIE HEANS	ENTS	Ŧ	316.7	319.9	329.4	322.7	323.7	CUMULATIVE MEANS	LENTS	Ξ			321.5	321.9	322.1	MINUTE STANDARD DEVIATIONS	2	ī		• •	0.	4.1	0.			ĭ	0.	7.0	7.8	7.4	4.4
0 V A		D N I N I	COEFFICIENTS	a	637					ULATIVI	COEFFICIENT	0 5 5 6		, ;	2 0	9	619	E STAN	COEFFICIENT	9		93	a	8.5	0	CUMULATIVE STANDARD	COEFFICIENTS	H	0	90	- 7	12	6 1
	č	20	OUNIER C	3	-67	35	-31	0	4 4	200	OURIER		,	0	- 0	7	0 -	HINUT	COEFF	3	c	70	0	110	0	LATIVE		3	0	7.8	99	11	11
			100	>	463	264	109	520	210		FOU	>		500	5 5 5	5 30	535	ONE	OURIER	>	c	150	0	134	0	COMO	OURTER	>	0	121	105	102	0
				>	-435	1 6 7 1	-357	-386	-374			5		7 3	1630	1 - 4 - 7	014			>		3 4	0	36	3			>	0	58	5.4	50	6 1
HFEC2			-	ĭ	312.3	321.5	327.8	322.8	338.0		-			314.3	320.8	321.4	323.8		-	ī		18.2	0.	8.8	0.		-	H	0.	13.9	12.3	10.4	11.3
VAD				0	126			~				0 3 3 4 5		,,	0 7	3.5	3.4			PEED		20	0	9 7	0			0334	0	38	3.1	3.5	3.0
			PEAKS		100	6 3	134	0	133		PEAKS			001	200	a	63		PE.AKS	3		t 0	0	54	0		PEAKS	•	0	3.2	3.2	0 7	0 3
	•0•			>	610	175	783	734	67.8		4	>			713	7.20	145		4	>		223	0	6 7	D			>	0	169	9+1	9	121
				0	089-	-566	764-	195-	.353				,	0 0	1001	-571	-540			ס	0	202	5	- + -	0			ס	D	157	7	126	**
	и£16н1			2	-	~	•	7	S			z			7 "	1	'n			Z		- 7	•	7	'n			z I	-	7	•	*	ď

Fig. 4-13 - Wind Data Measured at 90 m Altitude with Low Clouds

	9:45:19			SP	37	36	52	05	53			SP	37	37		7 :	•														
	START TIME .				324.8							•			324.1										s .						
	END		_	PEED	1000						-	SPEED			994														٠		
HD270.			WAVE FIT	01	-51						WAVE FIT		-51	-50	4		- 45			ĭ	•	20.3		•			ī	•	14.7	13.2	6.01
			SINE	>	817	150	843	773	159		SINE	>	817	172	790	187	181		F17	SPEED	0	8 0	, -	0			SPEED	0	12	7 1	25.
VILE A				>	-575	-632	-438	-458	-521			>	-575	-613	-569	-532	-531		WAVE	×	0	54	. ~	0		WAVE	3	0	20	9 :	- :
HUNTSVILE			-	30	٦	7.6	7	22	=		-	30	•	8	15	1.1	9	S N O	SINE	>	0	251	9 4	0	so z	SINE	>	0	Œ	153	122
116		5,		20	1	53	60	22	2	5		20	1	22	1.8	6 1	1.1	DEVIATION	_	D	0	253	2 0	0	VIA110	_	>	0	182	172	7
12/07/1		ONE MINUTE MEANS	IENTS	ī	321.6	317.3	330.1	325.2	372.6	CUMBLATIVE MEANS	IENTS	ī	121.6	318.7	321.6	322.8	322.8	STANDARD D		H	0.	26.2		0	CUMULATIVE STANDARD DEVIATIONS	2	ī	0.	18.7	16.3	0.4.0
VAD		IE HINU	COEFFICIENTS	SPEED	416	780	913	724	888	48LAT1V	COEFFICIENTS	SPEED	974	945	862	918	826		COEFFICIENTS	SPEED	0	5.6	2	0	E STANE	COEFFICIENT	SPEED		+	66	108
		ō	OURIER		63	4.3	4 6	6	63	5	OURIER			53	15	7	3	MINUTE		3	0	77	2 4	0	JLATIV		3	0	5.5	4.5	- 5
			100	>	763	548	161	584	202		r 0 U	>	743	620	663	636	9 + 9	ONE	FOURTER	>	0	257		0	CUMU	FOURIER	>	0	220	661	1 9 1
				0	+09-	-495	+5+-	-412	-539			5	404-	-532	-512	014-	-487			>	0	539	2	0			>	0	180	152	9+1
HRECZ			-	1	317.1	322.9	325.7	331.3	330.6		-	1	117.1	321.0	322.2	325.2	326.0		-	H	0.	24.2				-	ī	0.	17.4	7.	12.3
VAD				0.556			1 + 6					Chiro	3001	1000	985	396	696			SPEED	0	•	0 :	0			SPEED		•	30	43
			PEAKS		110	103	35	131	14		PEAKS			200	102	112	101		PEAKS	3	0	33	0 ;	77		PEAKS		0	54	20	54
	180.			>	7.87	162	118	803	9.40			>	7117	753	159	114	783			>	0	255	0 .	0 0			>	0	181	148	120
	**			-	. 44	125.	-529	-437	-472			Ξ	0	004	1589	-538	-526			5	0	327	0	00			>	0	240	500	175
	HE 16HT			2	-			, ,	S			- X		- "	. ~	7	5			Z L	-	2	n :	7 15			z E	-	7	3	7

Fig. 4-14 - Wind Data Measured at 180 m Altitude with Low Clouds

9:45:19		SP	5.2	0,	201	7	;			SP	52	3	83	16	7.0								
START TIME		ī	326.0	324.8	19.9	332.9	330.1			H	326.0	325.2	353.9	349.7	346.4								
	<u>-</u>	SPEED	978	700	891	1010	0 7 0 7		111	SPEED	916	986	496	973	984								
	WAVE FIT			-29	-67	-50	-20				-28	-29	- 38	7 -	-37			ī	•	15.8			
	SINE	>	811	801	156	668	100		SINE WAVE	>	8	804	642	693	728		F11	SPEED	0	4	0	0	00
		>	-545	-5555	877	454	-517			כ	-545	-552	101	-247	-292		WAVE	3	0	33	0	C	00
	-	30	28	1.2	3	7	56		-	30	28	17	52	2.1	2.1	S # C	SINE	>	0	196	0	C	00
S		20	25	1.5	69	0	31			20	52	1 8	31	56	27	DEVIATIONS		כ	0	195	0	C	0 0
ONE MINUTE HEANS	TENTS	ĭ	323.6	326.9	71.6	335.5	331.3	CUMBLATIVE MEANS	IENTS	ĭ	323.6	325.8	352.3	348.9	346.0	DARD DE	S	H	0.	20.6	0.	0.	
E S	FOUNTER COEFFICIENTS	SPEED	747	016		956	146	HULATIV	FOURTER COEFFICIENTS	SPEED	747			822		HINUTE STANDARD	COEFFICIENTS	SPEED	0	56	0	0	0
0	R I E R		91	65	1	33	0	0.0	RIER		0	69	3	20	57			3	0	7.2	0	0	00
	100	>	109	733	185	870	8		FOU	>	109	689	563	624	637	ONE	FOURTER	>	0	1.31	0	0	0
)	-442	1488	559	-395	382			c	244-	-473	-215	-251	-272			>	0	300	0	0	0
	-	ĭ	316.9	327.1	328.9	327.3	335.3		-	ĭ	316.9	323.7	325.0	325.4	327.1		-	H.	0.	5.8	0.	0.	0.
		SPEED	931	186	196	487	566			SPEED	931	496	698	968	973			SPEED	0	23	0	0	0
	PEAKS	3	47	9.5	101	122	9		PEAKS		47	7.5	8	6 8	00		PEAKS	3	0	3.8	0	0	0
7u.		>	680	822	823	831	700			>	089	115	181	195	T D				0	7.3	0	0	0
ME16H1 = 270.		0	-635	-530	964.	-533	7			D	-635	-565	1+5-	.545	-523			5	0	10	0	0	0
HE 16		и 1 н	-	7	٦	Ŧ .	n			z	-	7	9	7	S			Z E	-	2	3	7	2

* SPEED 0 35 33 33 27 33 27 34 26 31 25

* 683 749 0

Z - NM T W

PEAKS

CUMULATIVE STANDARD DEVIATIONS

Fig. 4-15 - Wind Data Measured at 270 m Altitude with Low Clouds

CUMULATIVE STANDARD DEVIATIONS

111	SPEED	0	35	55	5.8	26
MAVE	3	0	28	36	0 4	38
SINE	>	0	105	174	177	175
	>	0	117	136	139	140
2	V W SPEED TH U V W SPEED TH U 0 0 0 0 0 0 0 0 0 0 13 29 46 9.0 191 112 78 68 11-4 117 115 56 52 10-0 164 195 96 112 17-4 136 115 65 49 12-7 16-2 16-2 88 89 15-8 139	15.8	16.2			
FICIENT		82				
V M SPEED TH V V SPEED TH 0 0 0 0 0 0 0 0 93 29 46 9.0 191 112 78 68 14.4 155 65 49 12.7 162 162 88 89 15.8	4					
	166					
-	SPEED TH U V W W SPEED TH U V W W SPEED TH U V W W W W W W W W W W W W W W W W W W	13.2				
		4.5				
EAKS		5 9				
PEAKS II, FOURIER V # SPEED TH U V 93 29 46 9.0 191 112 118 56 52 10.0 164 195 155 65 49 12.7 162 162						
	157					
	2	-	7	3	3	2

Fig. 4-16 - Wind Data Measured at 360 m Altitude with Low Clouds

9145119			SP	4.7	31	7 7	30	25			SP	4.7	42	43	4.2	5															
START TIME END TIME			I.	335.0	329.3	333.0	337.1	331.3			Ŧ	335.0	333.1	333.1	333.8	133.1															
	-		SPEED	424	1043	096	474	196		F11	SPEED	424	963	296	196	697													•	~	_
HD270	WAVE FIT		3	- 74	-36	-45	-37	-33		WAVE	3	-34	- 35	- 38	- 38	- 30				ĭ	7.6	• .	0	10.2			ī	7.6	6.3	Ś	. 7
464.	SINE		>	833	168	855	897	836		SINE	>	833	854	854	862	4 5 5			F11	SPEED	38	0 0	2	23		111	SPEED	38	7.	0 1	53
			>	-389	-531	-432	-378	458)	-389	-436	-435	-425	1433			N V E	3	1.5	c	200	22		F A V E		1.5	-	17	1 6
HUNTSVILE	-			9 1	0	1.2	٣	22		-	30	9	7	13	=	7	0.77	6.0	SINE	>	- 9	0 7	0	62	S. 7	SINE	>	- 8	39	5.2	0.7
9,2	n		20	50	+	13	٣	24			20	20	89	1 6	J	9 1	011011111111111111111111111111111111111			כ	127	0 1	n 0	161	101110		>	127	121	0.5	7
12/07/76	COEFFICIENTS		H	339.5	323.0	329.3	336.1	331.3	CUMBLATIVE MEANS	SIENTS	Ŧ	~	334.0	~	9	~		ANDRA	1 51	ĭ	7.5	0.	5 . 0	18:1	STANDARD DEVIATIONS	1 5 1	ĭ	7.5	10.9	8.3	1.4
9	COEFFICIENTS	•	SPEED	806	916	845	958	780	HELATI	COEFFICIENT	SPEED	806	863	952	872	6 + 6	,	ALSIA	EFF I CIENT	SPEED	39	0	25	26		EFFICIENT	SPEED	3.6	102	11	0
	FOURIER			4.3	-	19	37	<u>-</u>	0	DURIER		4 3	58	0 7	47	20		2	00		7.8	0	9	-	CUMULATIVE	0	*	7.8	09	09	7
	100		>	753	179	723	876	699		004	>	753	162	146	768	743		240	FOURTER	>	7.4	С	9	3 7	0000	FOURTER	>	7.4	50	£.	44
)	-278	-587	-429	-386	-360			>	-278	-381	004-	-398	-386				5	5 8	0	7	202			>	85	198	- 4	124
HREC 2	-	•	H	332.4	329.4	334.8	338.4	331.1		-	ī	112.4	331.4	332.7	333.7	333.0			-	111	4.7	0	1.5			-	ī	4.7	7.0	9.9	7 . 4
>			SPEED	902	1010	955	296	6			SPEED	0	400	546	156	451				PEED	7	0	25	130			PEEU	3	7.0	2.0	5 3
	P			63	63	7.4	101	6		PEAKS		-	6.3	6.7	13	11			PEAKS	E IS	2.0	0	52) 1		PEAKS	5	20	5-1	17	2.1
• 0			>	192	698	100	619	9 7 9			>	104	0 10	**	+	*				,	3.2	0	105	820			>	3.5	0.5	19	* *
T * 540			0	8 1 + -	+15-	101-	-360	455)		054-	-430	8 - 4 -	-428				0	154	٥	96	127			>	5.5	122	103	40
HE 16HT			Z E	-	7	~	, ,	S			Z E		. ~		7	S				Z Z	-	2	7	# W			z z		2	•	7

Fig. 4-17 - Wind Data Measured at 540 m Altitude with Low Clouds

Table 4-2

METEOROLOGICAL CONDITIONS FOR WIND MEASUREMENT IN LOW CLOUDS, HUNTSVILLE-MADISON COUNTY AIRPORT

8:55 CST

Clouds: 800 ft Thin Broken, 1600 ft Overcast Visibility: 2-1/2 Miles in Light Drizzle and Fog Wind: 320 deg at 10 knots

9:55 CST

Clouds: 400 ft Thin Broken, 800 ft Overcast Tops Reported at 7000 MSL Visibility: 1-1/2 Miles in Light Drizzle and Fog Wind: 330 deg at 14 knots

10:55 CST

Clouds: 600 ft Overcast
Tops Reported at 7200 MSL
Visibility: 2 Miles in Light Drizzle and Fog
Wind: 340 deg at 12 knots

this condition occurs, the wind angle is erroneous by exactly 180 deg. The wind speed is correct. The u and v components are correct in magnitude for each VAD scan; but are wrong in sign.

The one minute averages for which this condition occurs can be clearly identified in the data. Since it is known that there are six scans in every one minute average and the angle of one or more of the scans is wrong by 180 deg, the standard deviation of the one minute mean of the wind angle will exceed 60 deg if the condition occurs. Similarly, the standard deviation of both the u and v components must exceed 74% of their respective mean values. To see this, assume that the true value from each scan of a one minute average is a. Therefore, for 6 scans in the one minute average, the expected value and expected value of the square are

$$E(X^2) = 6a^2/6$$
 $E(X) = 6a/6$

and the Variance is

$$E(X^2) - E^2(X) = a^2 - a^2 = 0$$

If one of the six values has the wrong sign,

$$E(X^2) = 6a^2/6$$
 $E(X) = 4a/6$

and the variance is

$$E(X^2) - E^2(X) = a^2 - (4a/6)^2 = 0.52 a^2$$

or the standard deviation is 0.74 a. Thus the condition described above is suspected if the standard deviations of both the u and v components exceeds 74% of their respective mean values for the one minute average.

In some conditions (e.g., 43 m data of 14 September 1976 ending at 10:40:00) the standard deviation for winds calculated from the sine algorithm may indicate that this condition exists, whereas the standard deviation for the peak algorithm indicates that the problem does not exist. When this condition occurs, the wind data calculated with the peak algorithm can be expected to give more reliable data than the wind data calculated with the sine algorithm.

It is noted that this condition occurs only rarely for the light winds of 16 September and never for the higher winds of 18 September. The higher winds are less susceptible to wind speed changes of more than 90 deg.

This limitation of the Lockheed LDV as configured for the test has been recognized in the past. A translator is currently being installed in the Lockheed system, and translators have been installed in the LDV systems built for the U.S. Army Missile Command and Department of Transportation. The presence of a translator removes all ambiguity associated with the direction of the wind and solves the problem described. It also obviates the need for estimates of wind direction to be made by the system operator. The absence of a translator has caused no problem in past measurements of wind using the VAD mode. However, it is clear that a translator will be necessary for measurement of wind in light and variable conditions.

Section 5 CONCLUSIONS AND RECOMMENDATIONS

The ability of the laser Doppler velocimeter to measure winds in fog has been demonstrated. The continuity of the data recorded and the quantity of data recorded were adversely affected by the secondary purpose of the test. This purpose was the measurement of laser attenuation in fog and required that the laser power be kept constant within limits more restrictive than required by wind measurements alone.

The addition of a translator (to distinguish between positive and negative line-of-sight velocities) and real time data processing will further enhance the ability of the LDV to measure winds in fog. Both of these additions are planned for 1977. The ability of the LDV to measure wind in patchy fog or in fog and clear air above the fog is enhanced by the use of the logarithmic scale of laser intensity rather than the linear scale.

It is recommended that the future activities of the Lockheed LDV and the Department of Transportation LDV be monitored. It is likely that both of these units will take data in fog in their normal use.

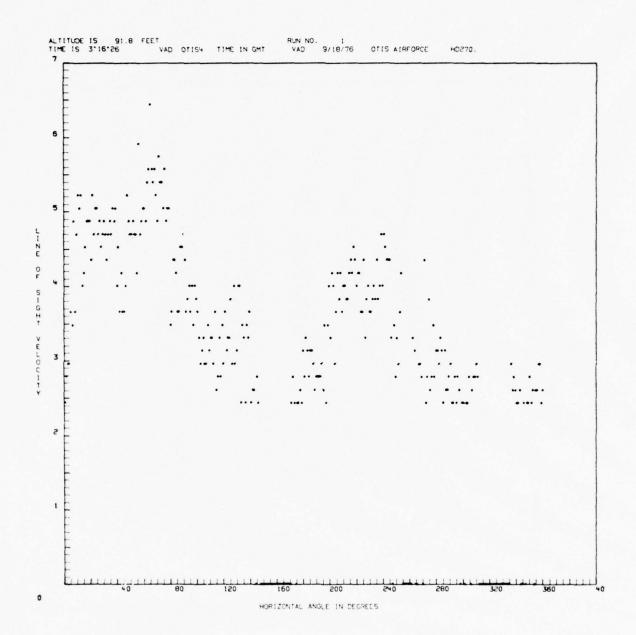
Section 6

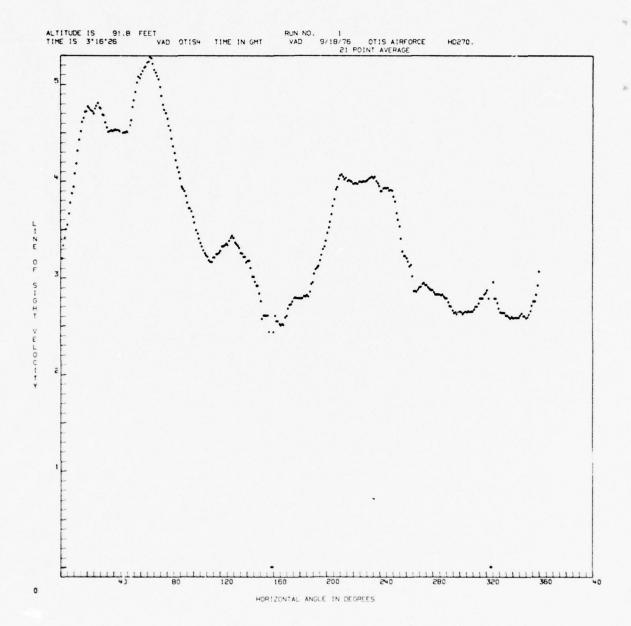
REFERENCES

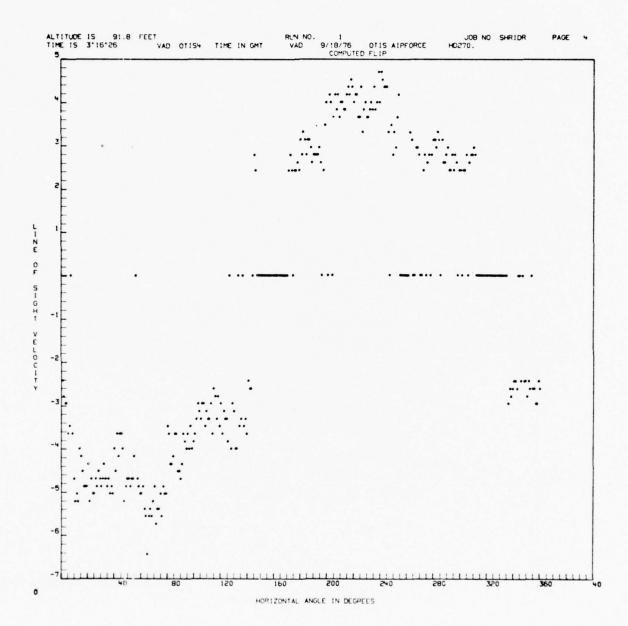
- 1. Little, B. et al., "Remote Sensing of Wind Profiles in the Boundary Layer," ESSA Technical Report ERL 168-WPL12, June 1970.
- 2. Lawrence, T.R., et al., "A Study on Laser Doppler Velocimeter Atmospheric Wind Interrogation Systems Final Report," LMSC-HREC TR D306888, Lockheed Missiles & Space Company, Huntsville, Ala., October 1973.
- 3. Bilbro, J.W., et al., "Development of a Laser Doppler System for the Detection, Tracking, and Measurement of Aircraft Wake Vortices," FAA-RD-74-213, March 1975.
- 4. Bilbro, J.W., et al., "Laser Doppler Velocimeter Wake Vortex Tests," NASA TM X-64988, March 1976.
- 5. Brashears, M.R., T.R. Lawrence, and A.D. Zalay, "Mobile Laser Doppler System Check Out and Calibration," LMSC-HREC TR D497036, Lockheed Missiles & Space Company, Huntsville, Ala., September 1976.
- 6. Brashears, M.R., and W.R. Eberle, "Verification of Wind Measurement with Mobile Laser Doppler System," LMSC-HREC TR D497071, Lockheed Missiles & Space Company, Huntsville, Ala., November 1976.

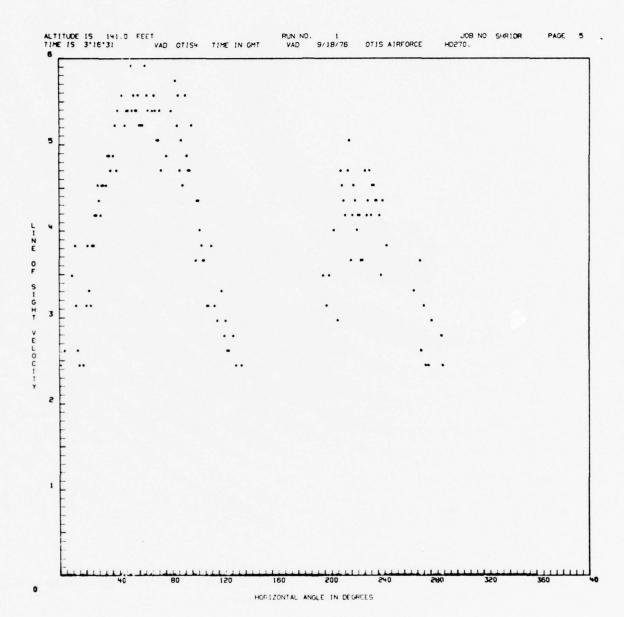
Appendix A

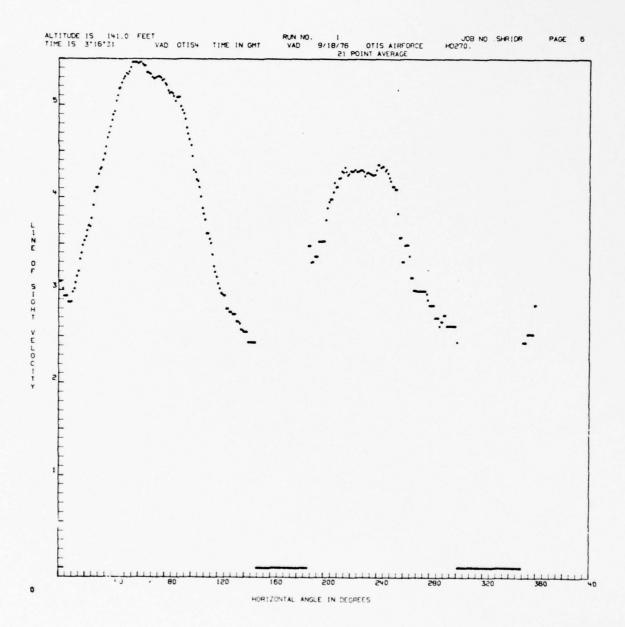
SAMPLE LDV SIGNATURES FOR OPERATION IN THE VAD MODE AT OTIS AFB, MASSACHUSETTS — SEPTEMBER 1976

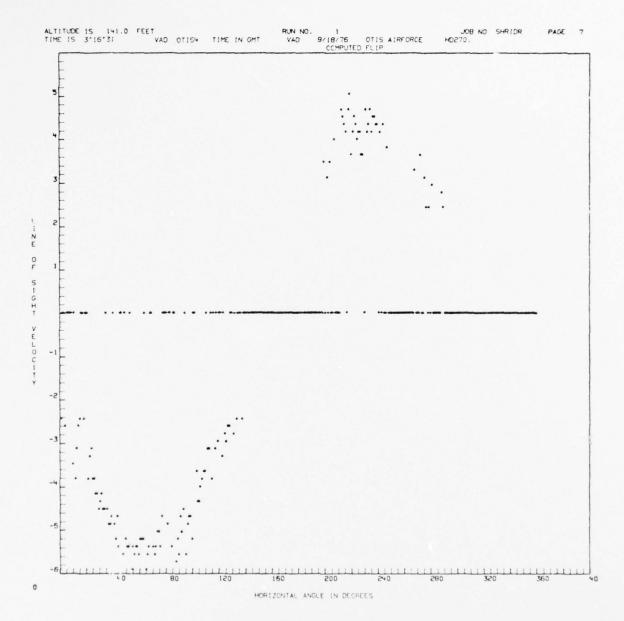


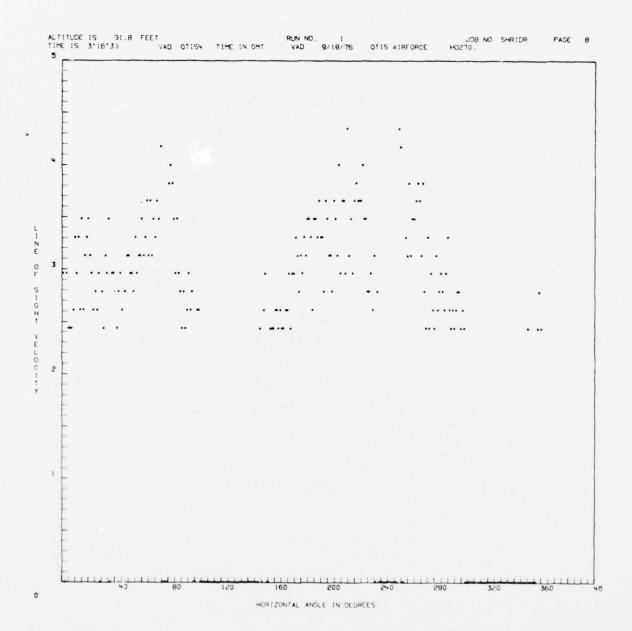


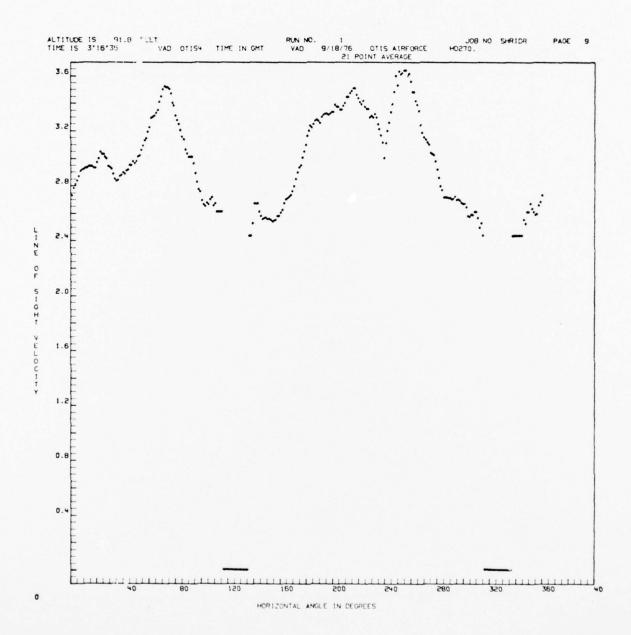


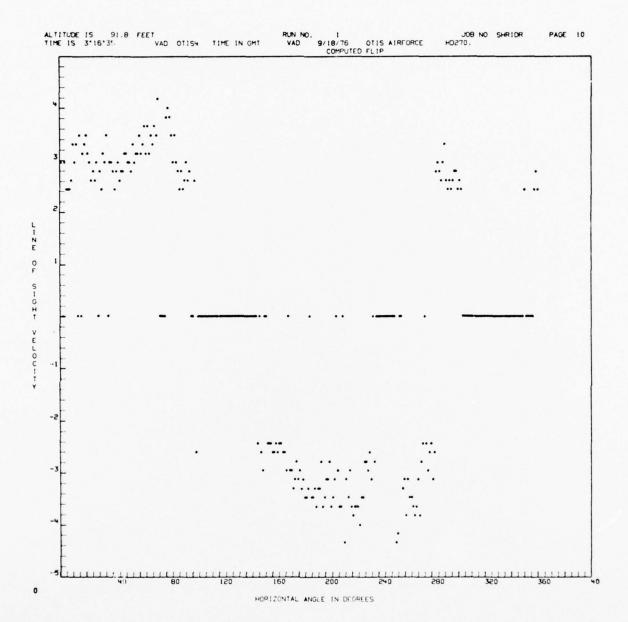


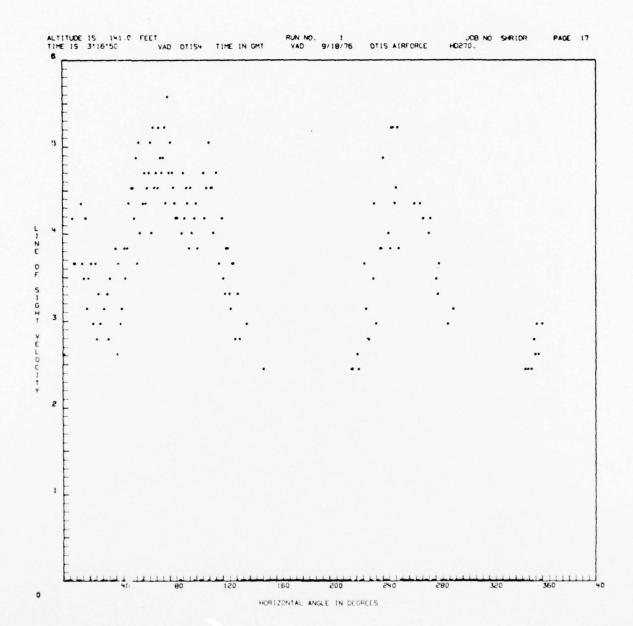


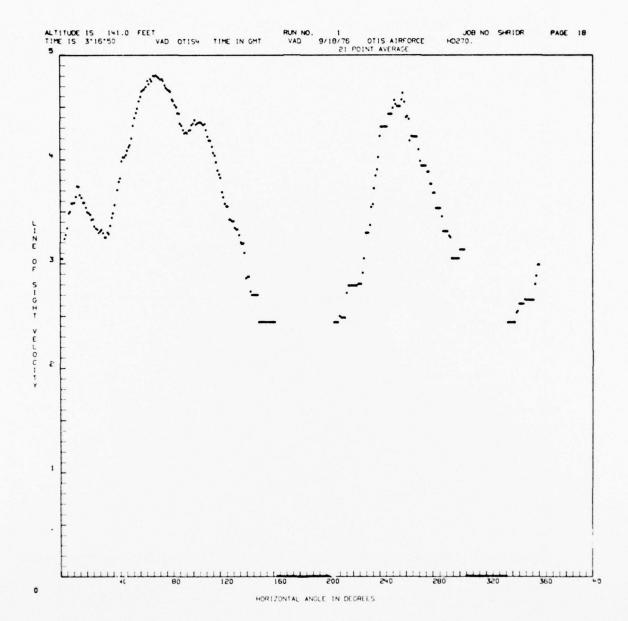


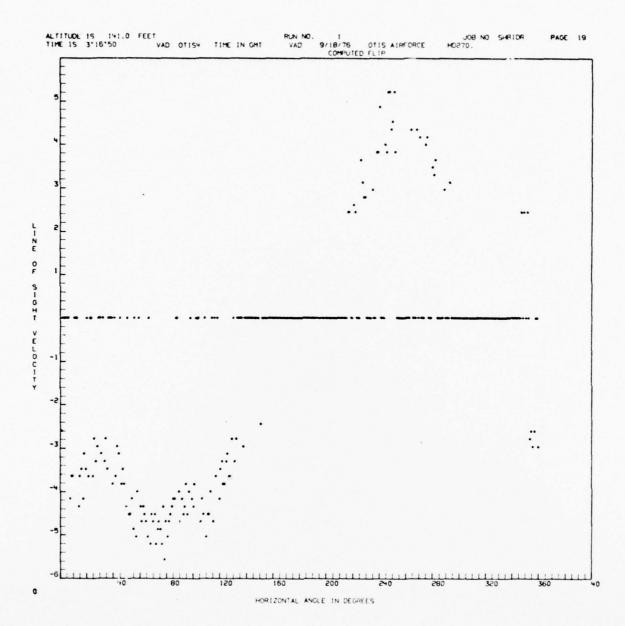


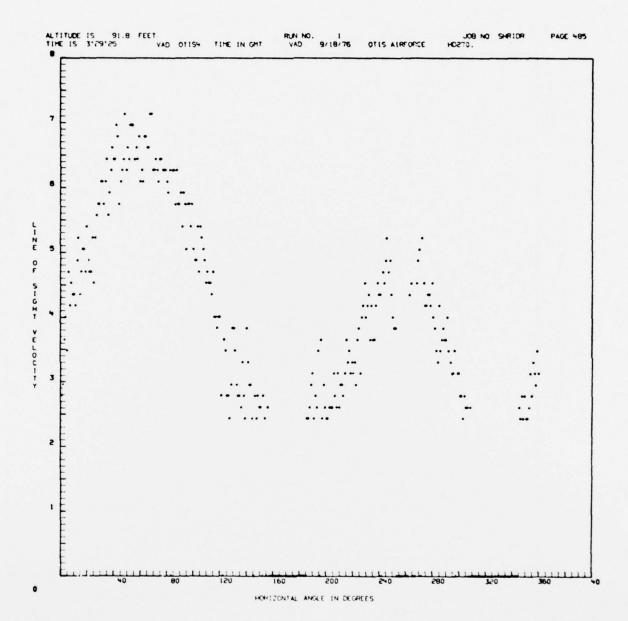


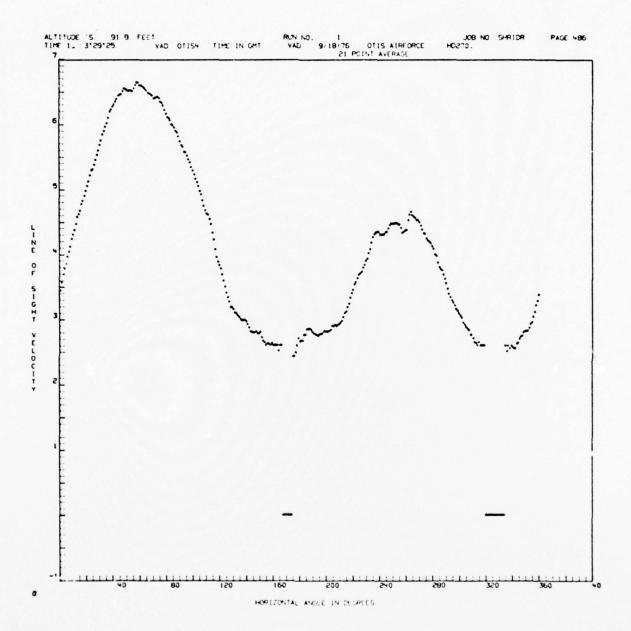


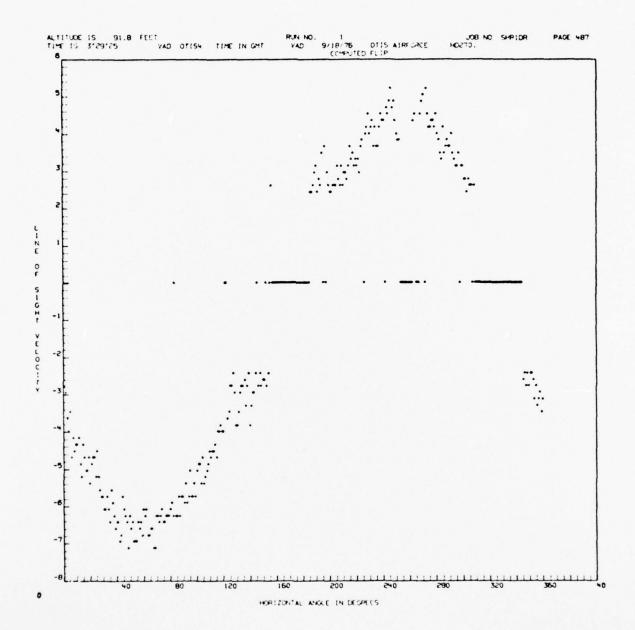


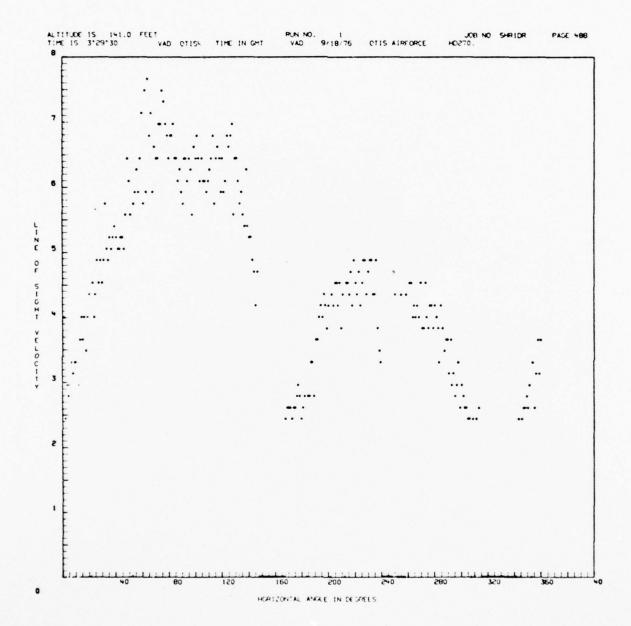




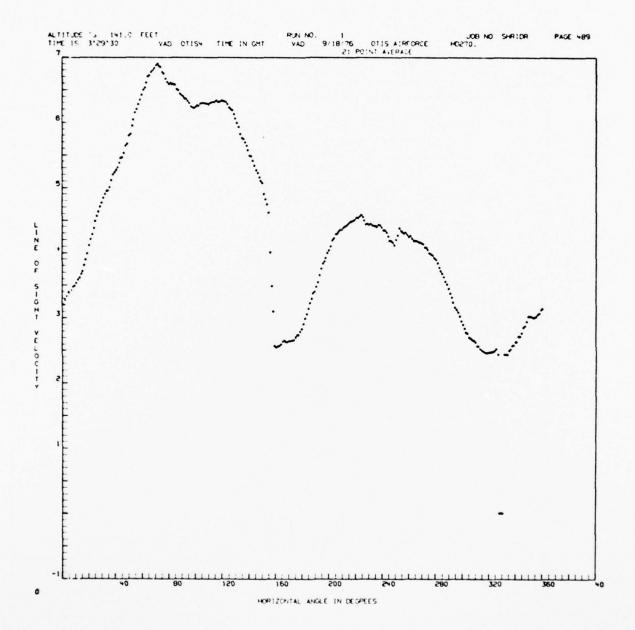


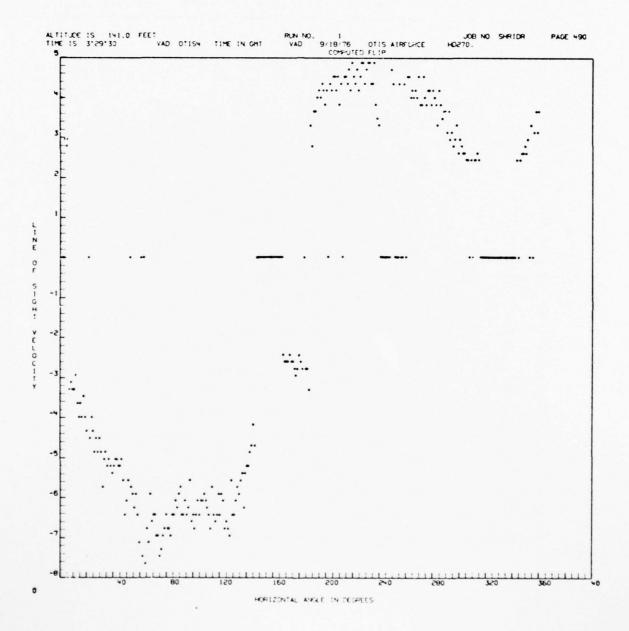


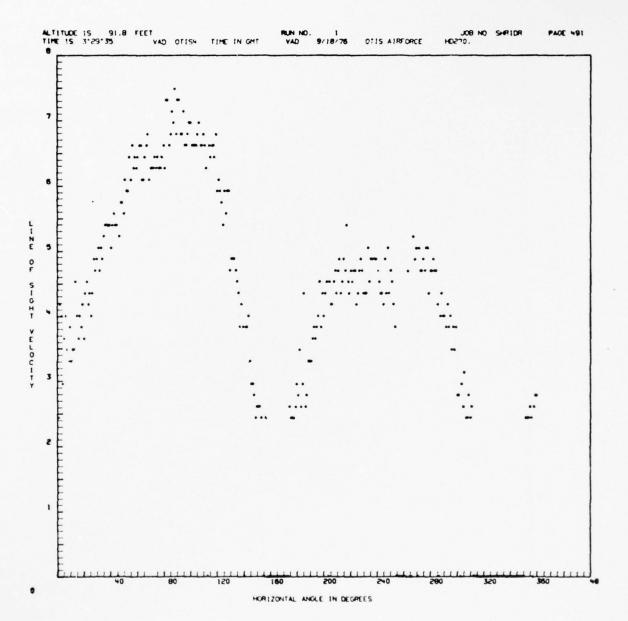


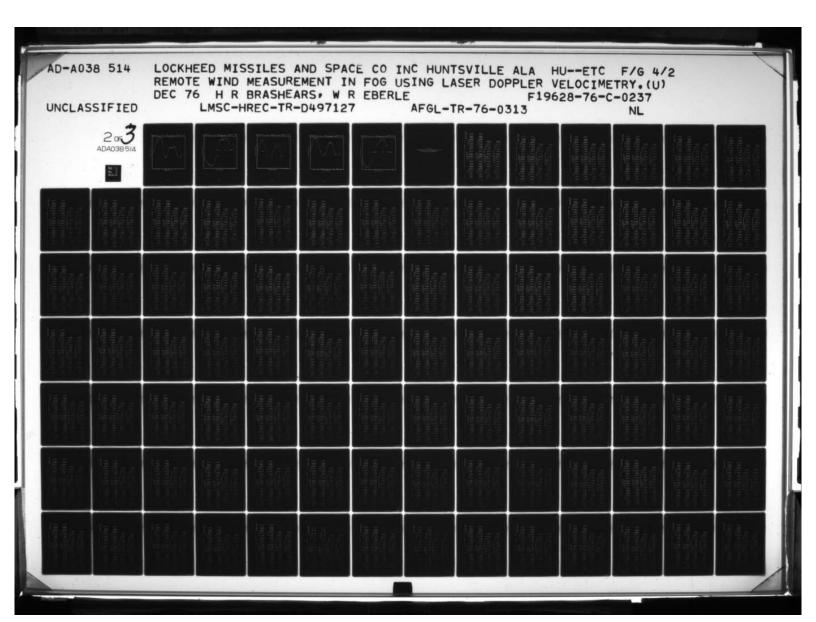


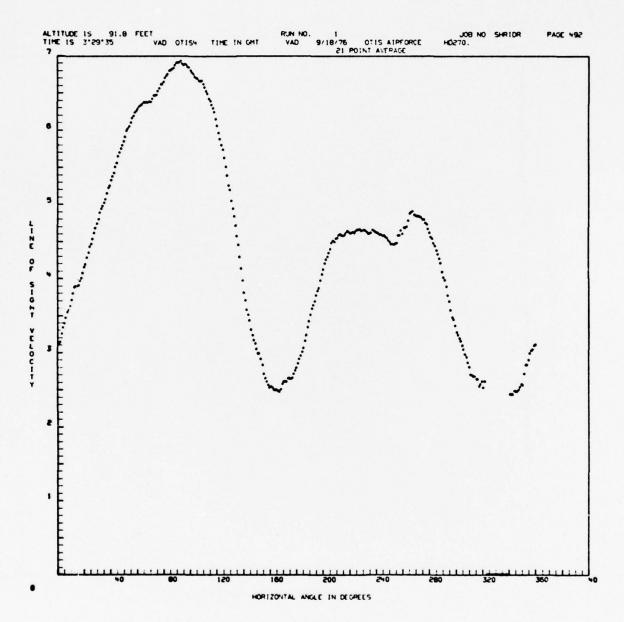
A-16

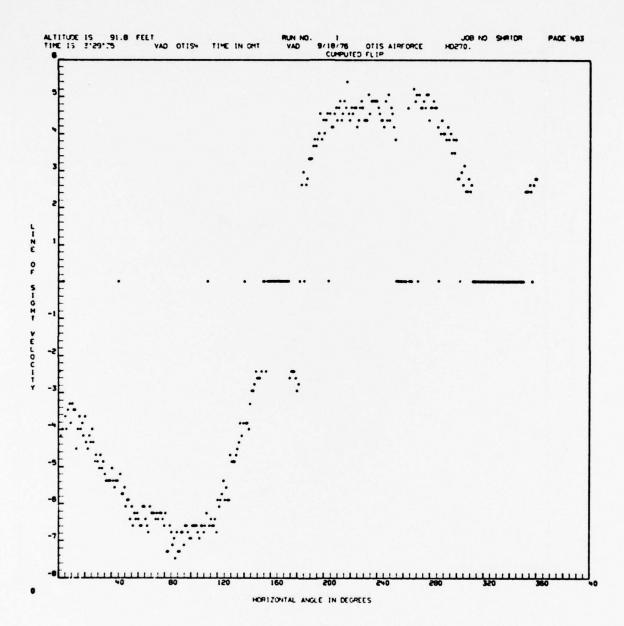


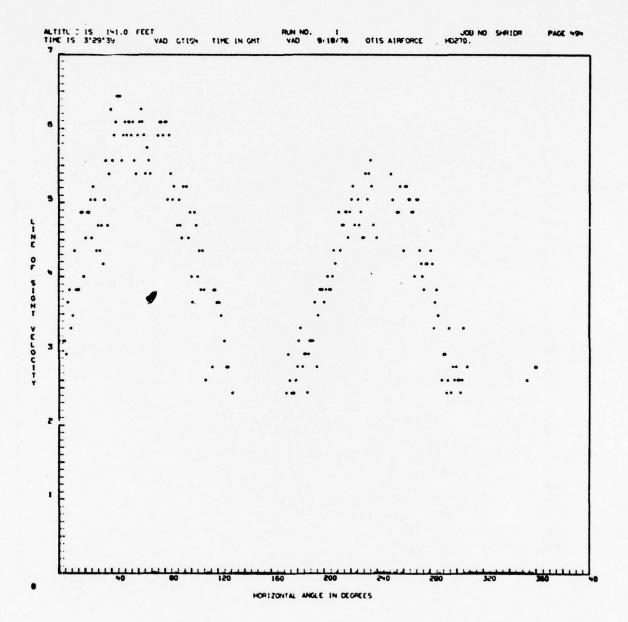


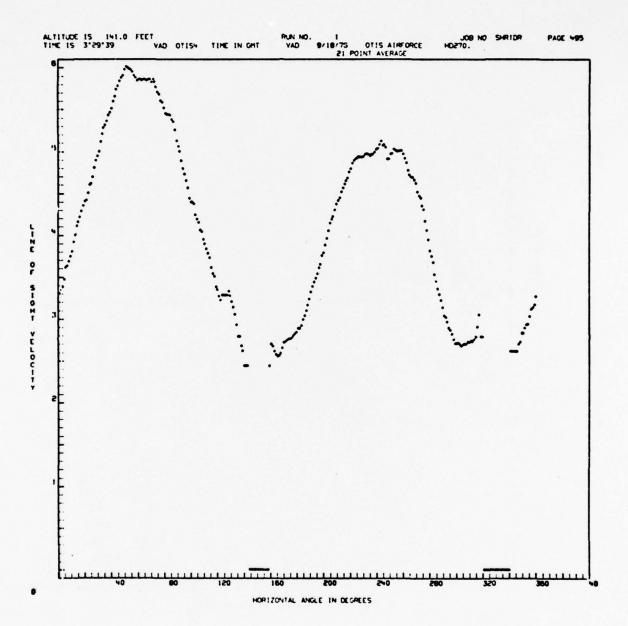


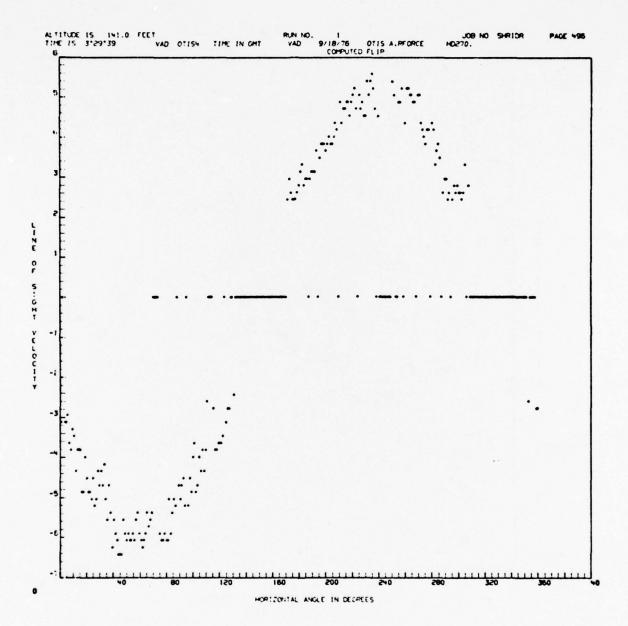












Appendix B

TABULAR DATA FOR WIND MEASURED AT OTIS AFB, MASSACHUSETTS, IN FOG CONDITIONS DURING SEPTEMBER 1976

9:20: 0		9		,	20	12	14	20				SP	13	- :																							
START TINE END TIME		2			124.4	129.6	134.7	9.441				=		136.0	134.0	134.2	13641																				
		0000	334	630	230	234	555	217			11	SPEED		233	233	232	229								_												
HD 90	MAVE FIT	•		-	-	7		7			WAVE FIT	*	•	- 1	41-		-15					Ŧ	8 . 4	12.6	13.8	13.	50.				=				2	4.8	
ų,	SINE	>		0 :	145	2 -	158	169			SINE	>	8 8	165	159		191				:	SPEED	.c	10	15	10	=			F11	SPEED		n o	• :	= :	- 2	!
AIRFORCE		=	, :		7/1-	-173	-15/	-117				0	9.1.	-156	-162	- 1 40	-152				3	*		0	12	0	=			MAVE						• •	
0115	-	9	, -	2 :	2	20	7.0	<u>-</u>			-	30	5	- :	8				SN	-	3110	>	-	45	25	43	20		S	SINE	>	-		3	. :	4 4	
37 S		20	;	3 :	52	53	7	27				20	23	24	25	27	22		VIATIO			>	32	22	54	32	9.		IATION		>	2	; =	; ;	2 6	38	
T VAD 9/16/76	STN31	1		100	17505	125.9	131.7	144.0		CUMULATIVE MEANS	STENTS	Ŧ	140.7	132.5	130.4	30.8	133.3		MINUTE STANDARD DEVIATIONS			Ŧ	1001	10.1	12.1	14.7	9.61		CUMULATIVE STANDARD DEVIATIONS	1 51	ī		12.7		2.0	14.9	
VAD	COEFFICIENTS	2500	300	503	203	198	161	189		HULATI	FOURIFR COEFFICIENTS	SPEED	203	203	202	200	197		TE STAI		1016	SPEED	22	9-	23	0	20		STAN	COEFFICIENTS	SPEED	23	7 -	: :	- :		
U	FOURIER	3			0	0	0	12		Ē	RIFR	*		- 2								*		15	8-	9	15		LATIVI		*			2 -		0 =	
N S	FOU	>			-	117	126	9 + 0			FOU	>	154	135	129	128	132		ONE	911010	1 1 100	>	15	39	7	39	45		CUMU	FOURTER	>		. 4	, ,	0 6	3.6	
1146		=	, ;	/ 7 ! .	101-	-155	661-	-108				0	-127	-145	-148	761-	-138					5	39	=	s.	30	41				כ	30			20	35	
07152	-	=			1.21	137.4		145.0			-	Ŧ	134.3				139.5			-	:	Ŧ	5.6	1.6	5.6	6.5	4.3			-	#	4.5		1.1		6.5	
9		SPEED			437	238	734	121				SPEED		235	236	236	233					SPEED	4	٦	•	•	5				SPEED		•	ď	שני	n ec	
	PEAKS				,	5 (20	3.5			PEAKS	*	7	4	20	20	215			DEAKS		N S	9	7	3	S	5			PEAKS	8	4				י יי	
28.		>		701	581	175	0 4 7	173				>	162	175	175	174	176					>	15	- 8	•	6	•				>	5	20	- 1	12	9-	
		-	, 4	0 :	241-	091-	141-	-135				n	-166		5	U	-130					ס	1.8	33	12	-	- 1				7		53	24	, ,	23	
HE 164 T		2				-						2	-	. ~	-,	,	v					<u>z</u>	-	7	•	7	r				ž		. 2	-	. 2	ď	
																E	3 -	1																			

9:20: 0			SP	c	•		7	22	*			SP	6 0	60	8 0	•	=															
START TIME			#1	137.7	138.0	140.3	141.0	140.3				I	137.7	137.8	138.7	139.2	139.5															
		11.	SPEED	566							111	SPEED	266	569	569	992	526						0							•	2	**
06 OH		WAVE FIT	*	-22	-22	-23	-23	-			WAVE FIT		-22	-22	-22	-22	-21			I	•	-	-	1.2				I	•	•	<u>:</u>	7.4
£.		SINE	>	197	202	208	198	173			SINE	>	197	199	202	201	1 9 5		F11	SPEED	-	8	st.	* =			111	SPEED	-	e	3	æ <u>•</u>
OTIS AIRFORCE			>	-178	181-	-172	-159	-139				>	-178	-179	-111	-172	991-		WAVE	•	-	-	_		2		MAVE FIT	*	-	-	-	⊸ ഗ
0115		-	30	10	90	=	s	15			-	30	10	•	10	90	<u>-</u>	SNS	SINE	>	ຕ	#	'n	T		SZ	SINE	>	~	7	•	9 5 9
92	5		20	13	12	-	=	56				20	13	12	-13	12	5	VIATIC		כ	c	٣	. n :	* 5		11110		Þ	3	n	s o	23
9/191/6	ONE MINUTE MEANS	CIENTS	Ŧ	134.6	134.7	137.1	139.7	141.2		CUMULATIVE MEANS	CIENTS	H	134.6	134.7	135.5	136.5	137.5	MINUTE STANDARD DEVIATIONS	15 1	Ŧ	9.4	5.5	3.	7.5		CUMULATIVE STANDARD DEVIATIONS	1.	ī	4.6	3.5	3.5	3.6
0 V V	NE MIN	FOURIER COEFFICIENTS	SPEED	240	247	239	231	190		HULATI	FOURIER COEFFICIENTS	SPEED	240	243	242	239	558	TE STA	COEFFICIENTS	SPEED	13	^	= '	2 8	2	E STAN	FICIEN	SPEED	13	=	=	11
5 -	0	RIER		26	28	30	27	15		20	RIER			27	28	28	25			*	^	7	.	m =		LATIV	COFF	*	1	4	v i	n o
TINE IN GHT		FOU	>	168	174	175	176	145			FOU	>	168	171	172	173	167	ONE	FOURIER	>	17	=	5	T 3		CUMU	FOURIER COFFFICIENTS	>	17	7.	3	24
7 I HE			>	-169	-174	191-	8 7 1 -	- -				5	-169	-172	-168	-163	-153			>	15	1	e n -	• 5			•	Э	1.5	12	= :	- a
07152		-	Ŧ	132.8	132.4	138.7	137.2	138.3			-	ī	132.8	132.6	134.6	135.2	135.9		-	ī	1.1	5.5		0.5			-	Ŧ	1.1	2 . 1	4.3	
7			SPEED	263	267	267	546	237				SPEED	263	592	992	292	257			SPEED	•	2	•	v 3				SPFED	•	C	J (a 5
		PEAKS		-	4	4 5	4	55			PEAKS		47	47	4	47	4		PEAKS	*	•	2	7	, "			PEAKS	*	3	2	n :	3 W
;			>	178	180	200	183	177				>	178	139	186	185	3			>	9	0	7	0 5				>	4	1	J .	
			>	261-	961-	-175	-168	-156				מ	-192	161-	-188	-163	-178			ס	•	c o	6					n	9	1	5	9 8
HE 1641 .			2	-	~	•	3	S				-		2	•	3	ď			2		2	r, .	J J				2 1 1	- ;	Ç2	٠, ,	
																В	-2															

9:25: 0 9:30: 0	SP 222	0 + - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	
START TIME End time	141.3 137.1 138.0 121.5	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	24 SPEED -24 213 -14 202 -2 190 -16 190	MAVE FIT SPEED -24 213 -18 207 -17 206 -13 201 -14 199 31.5 31.5 31.6 23.6 23.6 23.6	23.4 H 23.55 24.68
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	77 93 13 14
AIRFORC	132	* A V S S S S S S S S S S S S S S S S S S	M S N N N N N N N N N N N N N N N N N N
0118	23 22 32 24 32 29 24 21 40 40 27 21	6 8 8	51NE U V 110 12 346 69 641 74 641 74
9/16/76	~	4 0 18000	2 4 + + + + + + + + + + + + + + + + + +
T VAD 9/16/7	SPEED TH 177 137.4 175 134.6 175 138.6 176 115.8	FOURIFR COEFFICIENTS V W SPEED TH 29 20 177 137.4 19 16 172 136.7 96 13 166 127.7 91 12 167 125.0 ONE HINUTE STANDARD DE RIFR COEFFICIENTS 1 V W SPEED TH 12 12 26.8 65 14 21 28.8 7 13 9.4 CUHULATIVE STANDARD DEV	COFFICIENTS ** SPEED 12 23 13 28 13 28 13 28
F 5	129 20 111 13 116 15 16 15 175 12	Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	OURIER COEI V W W W W W W W W W W W W W W W W W W
N 1 H 1 H 1	1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1120 1120 1120 1130 1130 1130 1130 1130	27 27 33 54 49 46
0118	143.3 139.5 134.0 134.2	141.1 142.0 142.0 140.1 138.5 23.7 23.7 23.7 5.9 5.9	17 7.6 6.6 17.7 17.7 17.7 17.7 17.7 17.7
V V	8 SPEED 51 208 49 201 51 195 50 191 52 188	KS SPEED 208 201 196 208 201 196 201 1	2 SPEED 4 4 7 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	> 11145 1445 1445 1445 1445 1445 1445 144	< 4 \$	V 21 23 23 23 23 23 23 23 23 23 23 23 23 23
. 5	1122	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 4 4 E E C
31	5 - 0010	1 2 - 10 0 4 4.	I 5-/212

°.°																																		
9:25		SP	-	2	91	27				5		2 -	-	. 1	. 6																			
START TIHE END TIME		ī	143.8	139.4	143.1	153.8				2	4 2 2 2	8 - 1 - 8	142.2	. 44.9	142.4																			
90. ST	111					180			F1.1	200	224	217	211	204	198																			
5	MAVE FI	•	-21	-22	-20	-15			WAVE	•	-21	-21	-21	-18	-17				1	- 3			12.	16.2						. 1	7		0.6	-
5	SINE	>	180	159	159	113			SINE	>	180	170	166	164	155			113	0		n ac	1	٦	7				111	SPFFD		0	1.2	17	20
OTIS AIRFORCE		5	-131	-135	- 18	-124				0	-131	-133	-127	-116	-117			MAVE	•	-								MAVE F	*	~	'n	S	9	7
0115	-	30	•	=		7 9			-	30	•	٥	1	30	0	•	2	SINE	>	0	20	-	23	37		S		SINE	>	0	18	1.7	6-	30
4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		20	9	2 :	- :	æ æ		s		20	9	15	<u>+</u>	15	9:-				5	-	5 -	1.5	33	33		IATION			n	13	13	15	30	30
T VAD 9/16/76 ONE MINUTE MEANS	IENTS	Ŧ	143.0	139.9	9	131.5		CUMULATIVE MEANS	1ENTS	Ŧ	143.0	9.141	141.6	143.2	141.0	200000000000000000000000000000000000000	0 0 0 0 0		ī	3.0		0.4	10.7	13.1		CUMULATIVE STANDARD DEVIATIONS		2	H	3.9		5 • 4	7.3	9.0
VAD F HINU	COEFFICIENTS	PEED	187			108		ULATIV	COEFFICIENTS			178						COEFFICIENTS	PEED	•	-	=	1	ď.		STAND		COEFFICIENTS	PEED	0	7	4	52	31
•	FOURTER	3						50				ú2				1		CUEFF	8	4	۰					ATIVE		COEFF	*	7	1	•	7	^
N 64	FOU	>	6 7 6	/7!		- 2			FOURTER	>	641	139	134	121	911	4		OURIER	>	=	23	12	12	12		CUMUL		FOURTER	>	=	20	61	2.5	-
1 H		> :		200		-78				ם	==	-108	+ C -	5	26.			L	5	=	10	0	7.	-				6	ס	=	=	1.2	2.3	22
07152	-					131.8			-		35.8		38.5					-	11	5.1	1.	8.3	13.3	25.2				:	11	2.1	2.6	7.9	8.2	12.9
4 4 9		SPEED								•	554	218	117	107	æ				PEED	۰	7	•	T	•					0	0	01	13	a	20
	PEAKS	* 5	7	5	4.7	43			PEAKS	*	5	23	2 .	75	35			EAKS	₹ SP	٣	s	. 2	•	r			0 2 2 2 2	C * * C	SPE N	•	S	· .	•	
;		> 4	165	9 5	136	104				>	160	162	101	701	5			۵	>	9	c c	20	47	*			٥		>	4		- :		-
		2 4	-128	-123	=	-122				ס	-155	-143		261	051				n	15	<u>+</u>	21	15	5.					5	5	20	12	52	
3		= -	. ~	3	7	2				2 .	,	~ ~							2 X		٠,	- 3		n					2 .			7 3		r
													В	-	4																			

9:30: 0			SP	12	-			51					SP	1.2	13	7 -	Ŧ :	<u>.</u>																		
START TIME END TIME			I	130.4	124.3	1 3 . 0	1	112.0						130.4	127.1	122.7	121.8	0.021																		
	F11		SPEED	201	197	. 6	200	203			=		SPEED	201	661	197	198	700																		
06 04	WAVE F		*	-23	-21	- 5	-2-	9-			MAVE FIT			-23	-22	-20	-20	-				I		5.0	1.5.	26.4				1					7	
3	SINE		>	130		7.4	0	19			SINE	:	>	130	120	105	501			F 1.7		SPEED	~ ·	σ.	n i	n ao		:		SPEED		, -	ט ט	ר ט	^	
AIRFORCE			>	-152	-161	-171	-174	-175				:	0	-152	151	9	591-	\ G		WAVE			- ;		0 0	13			4 4 4	*	_	٠.) 4			
0115	Ī		30			-	-	22			-		90	0- 0		2 :	= =	2	SNO	SINE		>	•			6 8	SZ		2 2	>	1		. ~	2	47	
77 S N			20	17	13	11	=	24		s			0.7		<u> </u>	•		2	EVIATI	_	:	o :	F 0	o -	: 1	o vo	1 A T 1 0			>	7	α	=	: =	-	
9/16/76	TENTS		-	123.0	122.4	113.7	117.6	110.2		E MEAN	IENTS			123.0	0.771		117.5		DARD	S			5.7		0 0	24.0	STANDARD DEVIATIONS		1	ī	2.3	4.	. 0		13.0	
T VAD 9/16/7 ONE HINUTE MEANS	COEFFICIENTS		SPEED	186	182	173	183	180		CUMULATIVE MEANS	COEFFICIENTS	0 2 3 0 5	_	6 9		0 0			MINUTE STANDAPD DEVIATIONS	COEFFICIENTS	27.0	37550				23		THEFT		DEED	J	^	0	=	13	
6H1 C1	FOURTER			2	25	<u>α</u>	22	20		5	FOURIER				3 -	, ,	2.						, r	- =		-	CUMULATIVE			2	-	•	α	7	o	
Z	E O	*	> !	0	44	10	8 5	67			F 0.	>			. 0	9 0	α 3		9110	OURIFR	>		. 4		22	4.5	CUMU	OURIER		>	00	13	28	2.7	36	
7 1 ME		=		ر د . د د .	-152	-153	-140	-155				D		-153			-155			•	=	,	-	-	13	2.2		L		د	3	10	9.	=	13	
01152	-	-		1631	6./11	107.3	7.4.1	1.61			-	1	125.0	121.6	117.1	7 . 4	6.911			-	1		0.01	28.0	6.3	4.5		:		I	5.3	B.9	17.8	15.5	0.4-	
V A D		Chick	100		061	189	194	202				SPEEN	7	26	6	. 6	2				0 3 3 4	,		•	'n	2				SPFED	S	2	5	S	α	
	PEAKS			0 0	20	45	a	Œ T			PEAKS			25	0.7	0 7	6 0			PFAKS		'	4	4	3	3		PEAKS		45 4	2	*	7	•	S	
24.		>	114			21	B .	100				>	5	100	8	20	8				>	15	3.9	T	20	#				>	5	2.1	2.4	47	43	
		=	151-		001	4	-177	-179				D	-156		141	-145	- 1 6 8				13	-	*	13	0	α				11	-	13	13	1,1	7	
HEIGHT		21 1			4 .		7	5				E	-	^							7.1×		•	-		c				<u>.</u>	-		-	*	ď	
															E	3 -	5																			

9:30: 0 9:35: 0		SP	2 .	2	92				SP	33	5.6	88	28	28																	
START TIME 9						106.8						104.4																			
	111	SPEED	4/1	168	173	175		F11	SPEED	174	0 171	172	172	172				I	9.	.7	æ ,	31.7				I	9.	1.1	24.0	6.3	
O F	SINE WAVE FIT	>				48 -7		SINE WAVE FIT	>		2.7						-					7 31			_	EED			1 2		
AIRFORCE	15	2	-167	-147	-139	-162		\$)	-167	-158	-152	051-	-153			MAVE FIT	SP	01	01	œ:	-	•		MAVE FIT	4 SP	01	10	01	= :	0
011S	-	30	26	56	-:	7 1		-	3	2	26	2	2	2	0 20		SINE	>				88		SNO	SINE	>			2 67		
9/16/76 MEANS	S	8				91 6	SNA	s	2		5 38				TATVE		-	0				.7 22		DEVIATI	-	. H	1	-	2	2	2
T VAO 97	COEFFICIENTS					10 106.9	CUMULATIVE MEANS	COEFFICIENTS			5.96 96			02 102	ANOTTE IVAG CORRESPONDE		IENTS		2			10 32.7		CUMULATIVE STANDARD DEVIATIONS	SINIE	03	5		7 25.3		
U		Sp			_		CUMUL	OURIER COE	305	0	α		_		1		COEFFICIENTS	3 8	2	3	3	v.		LATIVE S	COEFFICIENT	N SPE	2	•	3	7	3
1 N S M I	FOURTER	>	o	17	34	31		FOUR	>	. 0	12	61	2.1	23		20	FOURTER	>	28	æ	4 3	5.4		СОМО	FOURIFR	>	28	37	7	43	0 7
7 1 ME	_					8		_	1								:	=				0 13			-	0	•		0 11		
AD 07152						90 110.4			-					2 118.3				1	0		9 12.	0.01 01	•				c		я 25.0		3
>	SXV	SPE	-	_	-	01 04		PFAKS	U		- «			31 182			EAKS	× 0000		2	10	13	0		AK S	O J J d S		. 40	7	01	1.2
	134	>	119	3.8	74	747		ď	7		- a	10	14	9 5			a a	>	35	ď	3.1	33	37		9	>	-	7.3	42	5.4	# 5
16HT = 4		2	-	-	-15	-175			-					6 7 1					3		2		,			-			3 35		
HE		21 1		**	-	5 .			;		- 0			B-6	6					- 1		7				3					

	9:35:		SP	۰	<u>*</u>	•	8 9	<u>.</u>				96		71	-:	1 3	-																
	END TIME		11	125.2	113.6	125.1	125.1	5 • 57 1					7.57	130.0	12100	122.4	0 . 7 7 1																
	END	_			503					_						208																	
HD 90.		WAVE FIT	S		-16	-24	9 :	-		MAVE FIT			17-		071					H	4	24.P	1.9	3.0	2.5			ī	4.	18.6	15.5	13.6	12.3
E .		SINE	>	122	83	6 :	œ :	=		SINE	>		771	10.	001	-	:		F11	SPEED		• •	٦	7	-		F11	SPEEU	-	Ŧ	7	7	Ŧ
AIRFORCE			>	-172	-175	-168	991-	0			=	, ,	7/1-	173	-171	- 1 7 0			MAVE F	*		- =	7	3	-		AVE F	\$	-	60	7	1	•
0115 A		-	30	1	22	= :	2	2		-	4			0 3				SZ	SINE	>	-	τ α	1	10	20	5	SINE	>	~	6.3	25	4	-
91	S		20	S	20	0 1	5.3				6	9	n :	2 :	4 5	2 2	:	DEVIATIONS		ח	-	. ~	r	'n	2	IATION		Ð	-	S	S	2	9
9/19/16	ONF MINUTE MEAN	IENTS	I	122.9	1111.2	121.4	1.521		CUMULATIVE MEANS	TENTS	1	33.0	1 2 2 2 1	0 -	0.0	121.1		STANDARD DE	2 1	I		21.9	0.4	3.0	7.7	STANDARD DEVIATIONS	S	111	• 5	14.6	13.9	17.6	9.
VAD	UNI MINU	COEFFICIENTS			180				HULATIV	COEFFICIENTS						8			COEFFICIENTS	SPEED		2.1	S	•	2		OFFFICIENTS	SPEED	2	- 8	15	13	15
7 (1	0	FOURTER		24	22	27	- :	2	in D	OURIFR						200		MINUTE		*		13	3	3	-	CUMULATIVE	U	5"	c	0	α	α	α
IN GMT		F00	>	108	69	001	801	Š		100	>		000	0 0	. 0	0		9110	OURIFF	>	-	29	7	=	0	CUMU	008169	>	-	4.	3.6	35	32
TIME			٥	991-	-156	-163	00.1				:	, , ,	001		- 150	-157			•	ס	2	20	7	3	3		L	n	2	<u>.</u>	-	- 2	=
07152		-			118.9					-	1					117.0			-	1	2.0	6.4	3.2	5.8	5.6			11	2.0	5.3	α.	8 . 9	7.3
VAD			PEEN	80	205	40		2			a	200				203				FED		-	,	7	~			0334	2	~	•	3	,
		PEAKS	<i>y</i>	3	7	t :	, ,	2		PEAKS		3		7 3	4 5	2 2			PFAVS	N SP		3	S	2	3		PEAKS	45 1	3	0	5	7	7
a		•	>	110	9	= 5					>	-			97	6.5				>	1	22	0	-	6			>	1	œ -	4	23	
			n	-175	-177	-170					-	-176		-174	-177	-17A				-	~	-	0	a	1			0	3	æ	œ.	0 1	,
	1 2 1		1 1		2	-, -					7					5						2	*	1	1				-		,-	σ.	

۰ 。

9:35: 0 9:40: 0		SP	2.1	28	20	27	32			dS	3.1		23	24	52															
TTHE TIME							9.601					110.1		9.	7															
	=		163				190		<u>-</u>	SPEFO	1	170	8	185	00															
	MAVE FIT		-2	6-	-20	-	7		WAVE FI	•		• •	01-	=	=			ī	18.1	5.7	4.3	7 4 . 6			ī	1.8	15.5	- + -	15.9	
	SINE	>	7.0	37	*	24	7		SINE	>	70	5.0	76	7 9	09		F11	PFE		9	•	æ <u>~</u>		F 1.1	PEE		-	22	20	,
		>	-139	-173	-173	-183	-123			>	-130	-154	-161	-166	-158		WAVE F	s	0	S	7	3 C	2	WAVE F	8	10	c o	01	٥	
	-	30	53	15	٥	8	5.6		-		29	22				S	SINE	>	38	61	<u>+</u>	T T	· v	SINE	>	38	35	7	47	
		2 D	33	58	+	1.8	51			20	33	31	52	23	23	DEVIATIO		5	33	1 5	0-	s 6	1AT10N		כ	33	31	27	25	
HEAN	CIENTS	I.	114.2	102.2	119.2	95.1	104.4	E MEANS	1ENTS	ī	114.2	108.6	112.3	108.4	107.6	STANDARD DE	2	H	20.3	3.8	2.1	12.8	CUMULATIVE STANDARD DEVIATION	2	ī	20.3	15.8	13.9	15.3	
ONE MINUTE	COEFFIC	PEED	03				124	CUMILATIVE	COEFFICIENT	PEED	101	106					COEFFICIENT	PEE	-	1.8	S.	37	STAND	FFFICIENT	PFE	1.5	9	12	6 !	
,	OURIER	8	7	ď	۰	•	,	ð	2	*	2	3	4	S	ď	HINUTE	COEFF	8	2	7	~	~ α	3,114	COFFE		2	2	3	3	
	1004	>	37	23	8 9	=	28		FOUR	>	3.7	31	7	36	35	ONE	OURIER	>	22	c c	= :	7.6	כחווח	008159	>	22	1.8	54	28	
		כ	06-	901-	-121	4 - 1 -	-85			ח	06-	86-	-104	-100	+01-		•	5	28	1.7		٠.4			0	28	24	23	2.1	
	-						10401		-			109.8					-	1	16.0	7.4	• •	12.5		-	ĭ	16.0	17.3	15.1	12.5	
		G	175	202	211	202	202			PEED	S	187						SPEED	13	<u>-</u>	• :	, ,			4	13	- 9	0	17	
	PFAKS	8	=	55	47	5	5.7		PEAKS	*	=	3.1	11	7	7		PEAKS	4 5	6-	1	•	0 ~		PFAKS	345 ¥	6-1	2 2	24	2.2	
		>	5.6	9	113	4 7	5.4			>	2.6	19	80	12	4			>	37	23	63	3.8			>	37	32	4	40	
		n	651-	-187	-174	. 193	- 60			n	-159	-172	-173	-178	-180			D	31	1	T :	212			n		27	22	2.5	
HE 16H			-							.1.	-	2	-	,	ú			-	-	~	. ,	u				-		-	,	

9:40:		9	,,	,,			3 -6				SP	56	26	* 2	5 5															
START TINE END TIME		1	417.4			8.671	81.2				H	137.8	148.2	156.8	129.9															
S T S	=	SPFFD	17.1		0 0	561	167			-	SPEED		170	165	154															
	MAVE FIT						-10			SINE WAVE FIT	*	-1	-	9 -	=				Ξ	9.19	650	6 3 . 8	25.4			Ξ	61.6	62.2	54.0	
	SINE	>	8			0 3	-12			SINE	>	83	44	112	. 4		1		SPEED	9 '	•	25	4		11	SPEED		<u>+</u>	9	
		>	-57			1 1	-146				>	-57	-28	-23	-59		4 > 4			• =		25	9		MAVE FIT	•		5	•	
	-	30	2.7	21		2 2	24.			-	30	27	54	22	22	SNS	7		> :	200	7 7	11	8 2	S	SINE	>	118	117	001	
Š		20	26	75	52	7 7	-				20	92	30	36	7	VIATIO				0 4	2	4	\$	IATION		>	06	19	7.2	
ONE MINUTE MEANS	IENTS	ī	137.1	140.5	176.3	7.67	6.69	CUMULATIVE MEANS		IENIS	ĭ	137.1	1.47.1	155.5	121.3	MINUTE STANDARD DEVIATIONS			Ξ.		22.0	39.2	29.9	CUMULATIVE STANDARD DEVIATIONS	2	ī	64.3	63.6	55.5	
N H N	COEFFICIENTS	SPEED	80	40		000	- 2	MULATIV		COEFFICIENTS	SPEED	9.8	47	er e	101	TE STAN	COFFERENT		SPEED	2	۰ -	•	9	E STAND	COEFFICIENTS	SPEED	12	01	•	
0	FOURTER	*	-	-	4	0	=	5	0	OUKIEK	*	-3	-3	7 0	-	2	1			0 0	. 3	5	e.	ATIV	COEF	*	4	1	•	100
	FOU	>	42	99	9	7	-30			004	>	42	25	40	2.7	ONE	OURIER		> ;		. «	19	5.7	COMO	OURIFR	>	7.4	7.2	43	1
		0	-30	-		-12	- 63				>	-30	91-	-13	04-				5	34	3 8	-	20		•	>	20	7	-	
	-	ī	9.96	122.9	47.7	121.1	96.3		•	-	Ŧ	9.96	107.9	95.8	101.3				. :	22.0	37.2	46.5	23.9		-	ī	23.2	26.0	34.4	
		SPEED	185	171	133		193				SPEED	185	179	15.5	163				30		27	54	2			SPEED	50	23	32	
	CAKS		0	5	7.	25	7		PFAKS			50	23	26	53		PEAKS				32	35	-		EAKS	•	30	-	31	
•	L.	>	53	06	-37	24	5.4		۵		>	50	5.5	34	33		۵	3	. 46	62	11	1,1	8.1		34	>	59	69	2 8	
		5	-171	-132	-163		-175				0	-171	+5-	-134	-133					5.6	3.8	4.2	34			D	33	56	2 11	
100		<u>.</u>	-	~	-	J	J				T	-	~	m a	2				-		-	3	v.			<u>z</u>	-		-	,

	0																																						
0 : 6	6:45:			SP	5	23	25	2 6 2	20						SP	15	6	1.2	23	23																			
START TIME	DITHE			H	122.6	129.8	115.6	98.6	117.7						ī	122.6	126.2	122.3	9.911	116.8																			
	END	_		SPEED	204	214	189	180	211				_		PEED	504	508	202	161	661																			
HD 60		WAVE FIT			-21	-13		5	-21				MAVE FIT					-15							· .	•		25.3	14.3						I	1.2	8.2	0.41	19.7
w U		SINE		>	1.0	135	90	56	41				SINE		>	0	122	107	200	r E		113		SPEED	, ,	n 4			9				=		PEED	7	۲.	-	2
2000				>	-171	-162	091-	-163	-181					=	> (-171	901	191-		101		2 7 7 4		*		- =	•	•	01				MAVE FIT		S	-	a c c	10	30
		-	:	30	7	6-	20	22	1					0			,	2 7			S	SINF		>	1	5.6	09	7.6	4 6				SINE	>	-	~ ;	22	, .	70
	57			,	•	52	67	5 :	-					20	1	- 4	2 -				VIATIO			2	'n	30	20	8	28		ATIONS	ALIONS		=	, '	s ;	21	07	1 1
	ONF MINUTE MEANS	IFNTS		- 6	1.021	9.621	5.711		112.3		CUMULATIVE MEANS	27.47.7	0 1 2 1	ī		156.7	2000	115.2	4.4		MINUTE STANDARD DEVIATIONS	-		H.	2.1	10.7	19.5	22.2	17.6		CUMULATIVE STANDARD DEVIATIONS	KD DEV	-	7		7.1		0 0	0.0
	AF MIN	COEFFICIFNTS	0.50			101	171	071	5/-		ULATIV	STREET	71.130	PFFD	70-			150			E STAN	COEFFICIENTS		PEED	7	23	13	•	22		STANDA	AUNAIS	CIENTS	FED			32	, ,	,
	0	1 5 8						-			COM	FOURIER		S		17	-	=	13		MINUT	COEFF		S.	2	=	S	œ	=		ATIVE		COEFFICIENT	3		v 0		. 0	
		FOUR	>	00		2 4			2			FOUR		>	66	100	81	9 2	6.5		ONE	FOURIFR		>	9	8-	4.5	43	0+		COMILL		OURIFR	>	4	, <u>-</u>	37	47	""
			ם	791-	-121	-	-	451-						0	991-	77-	-132	-127	132			7.		5	S	32	- .	-	3.8				0 1	2	v	31	3.1	50	22
		-	ī			109.5		4.0				-						13.1	13.3			-		I	2.3	0.9		9.6	(.,				-	I	2.3	2.1	12.7	13.4	2.1
			PEED	198	506	188	177	711						w	198	202	197	192 1						\circ	~ .	r		2 :	-					E D	2	7	Ċ.		
		PEAKS	*	45	47	34	31	65				FEAKS		4	45	4 6	45	39	43			FEAKS		SPEE	n :	_ :		2 0	D				EAKS	SPF	3	10	13	13	+
28.			>	66	87	65	2	86				-		>	00	93	0	74	16			-	,		0 0	0 0	4		1				<u>a</u>	>	4	9-	9	4.2	38
			D	-170	- 1 P S	-148	-162	151-						n	-170	-111	-174	-171	5/1-				-			. 50		- 2						D	·	=	1.7	T .	1
H 5			-	-	2	•	z											١,							. 0		3	ď							•		m s		i.
																	B	-	10																				

0:42:0				~ .							•	_																	
		SP	-	2	, ,	2.1			SP	-	-	7	21																
STARE TIME END TIME		ī	117.8	1.66	5 60	99.99			ī	117.8	100.4	108.0	106.3																
	111	SPEED	818	206	192	173		111	SPEED	218	212	205	202						œ	.	, ,						۰.	ی .	2
06 04	MAVE FIT	*	-21	1		1 -		MAVE FIT	*	-21	-18	+ +	-13				I	3.	20.	31.	8.7				=	÷	16.6	24.	22.
¥	SINE	>	102	36		30		SINE	>	102	7.1	63	9 S			11	SPEEU	7	1	_ :	- 10		:	=	SPEEU	,	o 7		20
AIRFORCE		э	161-	-191	501-	-168			>	161-	161-	-181	-177			NAVE FIT	ż	2	=	<u> </u>	. "			4 ×	*	7	œ <u>-</u>	: =	0-
4 5110	1	30	30			2.5		1	30	60	13	<u>.</u>			SZ	SINE	>	7 -	7.1	o o	2.7	s	-	2 1 0	>	- 1	D 4	7.2	64
•		20	01	20	9 6 6	23			50	10	1.5	1 9	22		DEVIATIONS		ס	7	=	37	ď	DEVIATIONS			n	Ŧ (8 4	27	25
T VAD 9/16/76 ONF MINUTE MEANS	STRATS	H	110.5	6.40	5.701	95.1	CUMULATIVE MEANS	STENTS	ī	110.5	103.3	103.1	102.1		STANDARD DE	1 51	1 H	5.1	17.0	31.7	8.7			-	111	2.1	1	23.9	21.9
0 A N	COEFFICIENTS	SPEED	203	178	5 0 0	151	MULATIV	COEFFICIENTS	SPFED	203	161	-8	176			COEFFICIENT	SPEED	9	20	8 -	,	F STANDARD		SINGIDIA	SPEED	•		23	23
C			20	-	•	- v	3					١.	- -		MINUTE	COEF	ž.	~	10	• •		>1			*	~ 1	- :		- 0
z .	FOURIER	>	1.1	6 :	, ,	13		FOURTER	>	7.	47	45	0 5		0 11 6	HAIRD	>	6 1	æ 7	70	2.2	TATIA TOWN	-	11200	>	6	t 2	a ac	4
τ Α		ū	-188	-179		α τ			ס	-188	-183	-164	-159				0	•	23	- 62	α				۵	-	<u> </u>	35	3.2
01152	-	ī	1 4 . 4	108.8	0.70	0.70		-	I	1 4 . 4		108.4	108.7			-	H	3.8	0	13.5	21.8			-	ı,	3.8		-	7.7
2		w	-	00	- a	15.9			SPEED	210	207	201	000				PFED	9	7	J -					SPEED	4		1.5	
	PLAKS		4 4	5 :	, ,	. 1		PERES	4	9 1	4	45	3 J			PEAKS		3	•	• •				2 4 4 4	*	e :	T V	•	•
·	<u>a</u>	>	87	4 .	. ;	-		4	>	87	11	7	5 5			_	>	5-	37	1 1 0 C	5.8					- 0	38	3.8	1
		D	051-	a .		-147			=	061-	0 0	-186	-182				13	9	13	v 4	07					•	0 0	-	· e
. H. S. H.		1.		٠, ١													E E		τ.	n a	-							2	u
													В.	- 11	!														

	0 : 0																																
	9:45:		5		F 1	27	80	26 26				SP	31	53	52	56																	
	START TIME END TIME		2	- :	1.60	200	7.4.1	40.5				Η	4.7	84.5	2.00	95.5																	
	E _N	111	2242	•				171		=		SPEED	202	206	200	200																	
HD 90		MAVE FIT	4	: 1	0 1	1	2	-10		WAVE FIT		2	.5	•	- 10	-					Ŧ	29.0	33.1	8.2	15.1				I	29.0	30.0	1.07	25.1
CE		SINE	>		2.5	, a	-	-27		SINE		>	20	7 3	3 6	25			F11		SPEED	1.5	9-	.	. •		111		SPEED	6 .	9 -	0 1	212
AIRFORCE			>	-179		-192	8 8	-163				> !	-179	700	-185	-180			MAVE			13	9	• •	• •		MAVE			13	: :	2 2	:=
0115		-	30	21	20	? =	- 30	91		-	,	9.0	7 7		9 -	1		SN	SINE		>	93	113	0 0	. T	10	SINE		> 1	66.	0 0	6	e e
91.	S		3 D	29	54	12	18	23			,	0,	62	22	21	21		VIATIO			>	32	52	, ,	13	ATION		=	5	32	23	23	23
9/16/76	ONF MINUTE MEANS	COEFFICIENTS	ī	91.3	9006	1111.7	95.0	78.6	CUMULATIVE MEANS	COEFFICIENTS	7.			97.6	6.96	92.9		STANDARD DEVIATIONS	1 5.		I.	28.9	31.6	7.50	12.1	CUMULATIVE STANDARD DEVIATIONS	2 1	2		20.1	24.2	25.6	24.4
VAD	N IN	COEFFI	SPEED	125	155	180	169	123	TULATE	DEFF	0000	130	5 -	153	157	149		E STAP	COEFFICIENT		SPEED	-	28	22	٥	STAND	OFFFICIENTS	4	1	27	30	28	5.6
5 1	0	FOURTER	*	α	13	6	12	<u> </u>	5	FOURIFR	3		-					MINUTE	COEFF			x	~ ^	· v	'n	ATIVE	COFFF	*		· c	0	0	α
IN GMT		F00	>	7	15	9	12	-51		FOU	>	. 3	0	27	7.6	5		ONE	OURIFF	:	> :			6 6	22	Спип	OURIFF	>	. 5	9	42	29	8.9
7146				-112	-135	169	-151	e -			n	-112	-124	-137	-141	-136			ī	:	;	, ,		27	1.5			2	2.7	53	3.2	31	30
07152		-	ī	116.7	113.2	108.5	9.611	103.9		-	H		8.4.1						-				7.6	0.9	30.3		-	H .	11.1	5.6	10.3	9.6	5.41
VAD						502					•		211								3 -			. 5	1			60	7	=	٥	10	50
		PEAKS		7	7	40	37	2		PFAKS	*	7	7	43	4 2	ç			PEAKS	S S S S S S S S S S S S S S S S S S S	-		•	1.2	01		FEAKS	A SPFE	1.2	0	α	0	2
.5.			>	00	7	99	201	£			>	06	87	80	9.2	0			۵	>	33	0	7	71	7.8		6	,	33	2.6	32	31	1
			5	-162	75-	-	9/1-	- 42			9	-182	-189	061-	/a -	6/1				n	*		=	1.6	2.1			ā	34	23	0.0	20	12
# 1501 3H			-	- 1		e		,			:	-	~	•						214	-	r.		"	v			11 W	-	**	- :		
															B	- 1	2																

°.																																		
9:50:			SP	53	22	21	56	22				SP	23	23	22	23	23																	
START TIME			Ŧ	104.4	114.4	113.5	89.4	92.9				I	* * * 0 -	104.0	1.001	104.8	102.5																	
A 1 2		-	SPEEU	174	163	167	182	171		-		SPEED	174	169	168	172	172																•	
•06 Он		WAVE FIT		-16	-	+ - +	9-	-12		WAVE FIT			91-	-15	-15	-15	-15				I.			13.6	21.9				ĭ	22.	17.6		22.6	,
		SINE W	>	38	47	45	5-	۰		SINE		>	38	5 1	26	36	33			F11	SPEED	7	, ,	2.0	. 7			11	SPEEU	2.1	9 :			2
AIRFORCE			>	951-	9+1-	151-	-154	-160				>	-156	-151	-151	-152	-153			MAVE		ao u	ת ח	n o	. 0			n A V E	•	æ		e a	2 00	٥
0115 A		-		61	=					-		30		15					S	SINE	>	9 9	5.3	1 30	7		SZ	SIME	>	9 9	53	. t	2 2	ć
			20	13	1.1	8	54	2.2				20	-	15	91	1.8	61		VIATIO		ח	58	0 :	2 :	2 -		11AT10	_	כ	28	21	6 .	2 :	9
9/191/6	ONE MINUTE MEANS	1ENTS	ī	102.5	113.5	112.1	88.5	92.1	CUMULATIVE MEANS	STM31	2	ī	102.5	107.6	0.601	103.5	101.4		STANDARD DEVIATIONS	1 51	ī	22.9	0.6	0.1.	2		STANDARD DEVIATIONS	15	H F	55.8	- 8 -	16.0	23.6	73.6
V A D	MING	COEFFICIENTS	0 3 3 4				2,	4 6	ULATIV	STABLOTABLO	056610	•		153	. 5	152	152		TE STAP	COEFFICIENT	SPEED	27	6	ac i	ű.	2	E STAN	COFFFICIENT	SPEED	27	2.1	<u>a</u>	21	20
t	NO	1 5 8		,	· ·			13	50		DURIER	3					<u>-</u>		MINUTE			œ	4	α	0 -	•	CUMULATIVE		×	α	1	7	0	α
142 41		FOUR	,		6.7	0		•			e u u	7	20	4 7	77	3.5	28		0 115	STATION	>	6 A	2.1	27	7 0	v T	CUMI	FOURTER	>	8.9	5.5	4.5	9 2	63
1146			:			300		0 - 1 - 0				:		72.1-	7	35	-135				>	24	0	-	-	-			٥	24	2.3	σ_	17	-
01152		-						74.3			-						104.5			•	1	19.0	8.9	6.3	38.9	31.1		-	11	19.0	4.4		23.3	28.5
VAD			1		S :	7 1	0	155					Sytte	5	0	5	551				SPFED	-	1	α	13	^			0 3 3 4 5					
		EAKS			33	36	0	4.5			PEAKS			2 ;	5	36	0	,			×	2.1			-			PEAKS	*		- 9-	-	-	-
a		G.		>	54	5.0	24	-37					>	5 2	0	4 .	15	,			,	5.3	23	11	-	7.8			,		1 1	3.5	4.5	4.2
				- 11	7	-	13	-130					2	7	- 136	-139	-132	751-			:	, ,	1	*	5 0	2				5	n a	1	7. 7	40
				- -	-	2	-	a n					Ξ			-	3 4				:			m	,	U					- 0		*	20

B-13

9:50: 0				5.	2.	80	-	21					24.		*	,																	
			S		~	~	7	~			8	; '	• ^	. ~	~	~																	
START TIME END TIME			Ξ	71.0	57.6	29.4	110.0	118.3			1			62.5	73.9	82.5																	
52		-	SPEED	163	158	174	504	218		-	SPFFD		7 9 7	166	175	183																	
06 QH		MAVE 11		07-	6-	+	01-	œ -		MAVE FIT			-	. 1	- 8	-10				1	9.9	111.2	16.3	34.0				I	9.9	7:11	13.1	28.3	
w.		2175	>	-52	-83	181	7.0	103		SINE	>	-6.2	1 4 8	-74	-34	=			F 1.1	9 3 4		18	8 :	- n		111		SPEEU	+	~ .	9 ;	27	
AIRFORCE			5	-153	-130	1 7 7	-163	191			Þ		1 +	-145	-147	-156			MAVE F	*		=	= :	7 5		"AVE			~ .		- 0		
0115	•	-	30	52	æ _	21	15	=		-	30	26	21	23	2.1	- 6		SZ	SINE	>	9	3.1	- :	0 0	'n	SINE		>	r.	30	7 0	2 6	
2,0	•		20	35	40	39	2.0	<u>.</u>			20	35	3.0	38	34	30		DEVIATIONS		0	4	1.8	33	2	I A T I ON			n	J		2.5	5 6 2	
9/16/76	COEFFICIENTS	2	ī	71.2	54.8	57.8	1.0.1	115.3	CUMULATIVE MEANS	LENTS	1	71.2	63.0	61.1	72.8	91.0			2	Ŧ	8.5	11.5	17.7	3.1	CUMULATIVE STANDARN DEVIATIONS			1	æ :	7.71	7.00	31.5	
C 4 >	TABLET TABLE	71.43			112				MULATIV	COEFFICIENTS	SPEED	511	=	113	127	139		TE STANDARD	CHEFFICIENT	SPEED	2	S	•	12	F STAND	DEFFICIENT		SPEED	2 :		n a	3 6	
5	0		3	25	23	7 4	12	35	2	RIFP			23	23	20	2		MINUTE	SUE	*:	-	•	J (• •	711	000			- (, ,			
2	2		>	-36	-63	-56	7 4	-		FOUR	>	- 36	0 7	-52	-24	?		ONE	OURTER	>	=	6-	52		CUMILL	OURIER		>	_ :	33	77	7.3	
F			n	-101-	68.		-135				ם	-107	α ο	76-	-105	a - -			2	0	S	13	23	: =			-	0	r :		30	a 6	
01152	•	•			5.66					-	I		, –			9.5			-	ī	0.4	34.8	29.7	4.5		-			0.0	5.67	23.1	20.7	
>			SPEED	141	5	163	0	0			SPEED	4	191	0	7.0	1.1				FED	*	7					ü	2	3 .		ο α	22	
	A A A			3	0	0 :	-	•		PFAKS		-	1	œ	9-	22			PFAKS	A SF	*	+				FARS			3 0	0 0	a .	20	
•			>	14	32	2	11			u	>	7.4	5	53	2.9	C:				>	17	c a	21	7		a	5			. 24	S. A.	5.5	
"			7	M	30		-				11	7	a 6	2	7	e.					S	52							0.0		2.4	2.0	
. 31			 u				,					-	۲.	175	1,1	·				-1-	-	Eq. 1		2.							-	, ·	
															В	- 1	4																

۰.																																
10:01		SP	54	54	17	54	56			SP	54	54	54	54	54																	
START TIME END TIME		ī	10145	19.9	9.68	78.3	9.4.8			Ŧ	101.5	89.8	8 . 68	86.9	86.4																	
	111	SPEED	171	183	193	175	175		F17	SPEED	171	177	182	180	179									~							•	
D .	WAVE F		=						MAVE F	•	=	-10	-	6-	6-				1		1		, , ,	26.2			I	57.	3	45.	42.	39.3
 .	SINE	>	8	-16	12	-26	•		SINE	>	18	0	3	7	•			11	C D L C		• •	0 00	ı, c	•		F 1.1	SPEED	7	'	. 0	. ~	•
AIRFORCE		>	-112	-143	651-	** -1	451-			D	-112	-129	-137	-139	-143			MAVE	•	: -				•		AAVE	*	13	13	7	=	12
2110	-	30	22	23	20	22	23		-	30	22	22	22	22	2.5		SNO	SINE	>			0 0		75	10 2	SINE	>	106	103	101	80	6.5
3, 8		20	20	28	23	53	30			20	20	54	54	52	56		DEVIATIONS	_	=	0	, ,	, d	ם ב		VIATIO	_	Э	9.2	7.4	10	43	2.6
T VAD 9/16/76 ONE MINUTE MEANS	1ENTS	I	4.96	77.3	87.2	76.4	86.1	SNA PH STITE MEANS	IENTS	Ŧ	4.96	1.98	86.4	83.9	34.4		STANDARD D	v			0 0	0.71	33.0	25.9	CUMULATIVE STANDARD DEVIATION	2	ĭ	57.3	4 . 4	45.4	42.4	38.9
A # 100	COEFFICIENTS	SPEFO		15.0	991	147	7	VIT A 111	COEFFICIENTS	SPEED	140	146	152	151	149			DEFFICIENT		٠ له	2 5	7 7		0	E STANE	FFICIENT	SPEED	5		, ,	21	6-
U	8	*					13	1	FOURTER		ď		7	13	13		MINUTE	U				~ :	0 :	0	LATIV	A CHEF	*	1.2			- 2	=
Z Z	FOUR	>	•	-	2	-23			F01	>	0	7	2	•	7		340	FOURTER	;	> ;		,		9	CUMI	FOURIFF	>	11		12	7.0	67
1 1 M E		D	- 9.7			-124	-130			D	- 97	=	6 - 1 -	-121	-123					,		6 .	70				ם	7.8	4	17	9	5.
01152	-	1	0.7.0			112.3	711.3		-	ī	87.0	78.6	A 3 . 3	9.06	86.2			-		Ξ ;	1.17	30.8	7.0	38.1		-	ī	27.7	20.3	24.	27.2	30.4
>		2000	154	201	0 0	9 0	191			0 3 3 4 5	154		641	173	170					SPEED	,						0 2 3 4		n a		20	-
	PEAKS						2 -		PEAKS			. 3	6	7	4.5			PFAKS			2	T	•	51		PEAKS		-	ר ט	,	c a	1.7
28.		>	. ;	2 3			-37			>		-24	-12		7						5	11		0.0			>					7.8
					000		-124			-				7 7 7	4					>	53	11	56	- 1			-	0		25	12	3.6
HE 1641		2		- (, 3	· vo			-		- 6				15				1	-	~	~	7 41			1					u

0:5																																	
10:01		9	200	20	3 2	2 0					5	7	0.2	2.0	20	20																	
START TIME End time		2		000		0 40	105.2					- 6	20401	3000	106.5	106.3																	
	-	Sper	200	202	202	212	216			-		300	204	205	207	208																	
9 9	WAVE FIT	٠		7	-		- 1 -			WAVE FIT	,		9 1		9	-17				Ξ	7.6	17.4	6.7	10.0	4.7			1	7.4	13.4	9.11	0.1.	10.6
5	SINE	>	70	37	99	9	2.9			SINE	>		ט יי	8	5.9	5.6			-	SPEED	7	=	•	6	•		=	PEEU	*	œ	1	10	20
AIRFORCE		5	-195	-190	-189	-199	-205				=	-100	-193	-192	-194	-196			MAVE FIT	*	•	60	7	•	•		MAVE FIT	*			•		
2110	-	30	10	15	٥	10	•			-	30	•			=			SNI	SINE	>	2.7	09	23	35	35	s	SINE	>	2.1	47	3	36	37
776 Si		20	13	8	۰	13	•				20	-		13	13	13		VIATIO		>	S	1	T	= :	=	1 A T 1 ON		0	S	9	9	ec c	0
T VAD 9/16/76 ONE MINUTE MEANS	TENTS	ī	10501	98.6	103.9	193.0	192.6	PART ATTA HIMD		STNEI	ĭ	105.1	19201	102.7	102.7	102.7		MINUTE STANDARD DEVIATIONS	- 5	Ŧ	8.5	15.8	6.7	10.	:	CUMULATIVE STANDARD DEVIATIONS	2	ī	4.2	12.6	6.01	5.01	10.3
VAD MINU	COEFFICIENTS	SPEED	192	175	185	184	161	V114 101		COEFFICIENTS	SPEED	192			7	987		F STAN	COEFFICIENTS	PEED	7	15	3	1.2	2	STAND	COEFFICIENTS	SPEED	1	*	=:	= :	11
U	FOURIER	*	1.7	20	20	20	17	5	2	FOURTER	*			19	-	<u>.</u>								0 .		LATIVE		*	1	æ		r -	,
IN GMI	F 0 L	>	20	27	4.5	7	-			F00	>	20	39	7	7	7		ONE	FOURIFR	>	30	4 6	22	35	7	COM	OURIFF	>	30	38	33	35	3.5
7 1 H E		כ	-182	-167	-178	-176	-183				>	-182	-175	-176	-176	-117				>	5	_ :	· :	2 -	2		L	5	-1	- 5	2:		
01152	-	ī	107.5	101.0	105.9	105.7	6.401			-			104.5			10501			=	I.	- 6				•		-	ī		0.6	6	: :	
, A		SPEED	202	193	195	102	208				SPEED	202	198	141	198	500				PEED	.	.	2:	- 1				SPEED	7	•	۰ ۰	. 0	
	PEAKS		43	4.5	45	9	47			PEAKS		43	43	45	43	7			PEAKS	S	ı,		2 -	. 3			PEAKS	4 5	'n	7	ac a	,	
÷		>	09	37	53		25				>	09	4	20	5 2	76				,	4,	2 0	4 5	30			۵.	>	50	0 :	2 4	3 6	
		5	601-	101-	-178		-				ח	a	-188	et e	961-	n				5	2 ′	2	- 0	- 13				0	13	0			
HE1641		2	-		•	,	ď				× 1 ×	-	2		R	. 16	4			-			7 3	J.							. 3	u.	

10:101		•	•	: :	::	::	25			ď	•	7	12	12	-13															
START TIME END TIME		1	78.4	74.0	***	73.0	82.6			Ξ.	78.6	76.1	73.6	73.7	75.4															
	=	SPEED	**		9.		128		111	SPEED	146	=	140	137	136															
0 0	WAVE FIT	,					-		WAVE F	1		-							ī	15.8	6.2	2.2	36.5			H	15.8	*	100	17.3
35	SINE	>	-23	-37	-50	- 15	- 1		SINE	>	-23	-30	-37	-36	-33			F17	SPEED	20	*	c	m ~		11	SPEED		*	= .	==
OTIS AIRFORCE		3	-138		-127		-106			5		-133						WAVE	3	9			ın ın		WAVE	3	91	=	0	a o a o
5110			: -	•		-	3.5		Ī			: =					0 0	SINE	>	39	15	•	69	S	SINE	>	39	28	52	35
8 S S		20	7	17		- 1	50	s		70	7	30	23	71	71			_	>	54	3	7	5 8	VI A T 10	_	>	24	9 1	-13	18
9/16/76 JTE MEANS	CIENTS	I	78.0	74.0	. 8	73.4	81.0	IE MEAN	SIENTS	ī	78.0	75.8	73.5	73.5	74.9		0	S	Į	18.3	7.6	5.5	44.0	STANDARD DEVIATIONS	s	ī	18.3	13.1	· -	20.4
T VAD 9/16/7	COEFFICIENTS	SPEFO	117		1 2 2	000	-	CUMULATIVE MEANS	FOURIER COEFFICIENTS	SPEED	111	121	121	116	=			COEFFICIENT	SPEED	91	•	*	15		COEFFICIENT	SPEED	91	13	01	2 -
U	FOURIER	3	2.1	-		α.	^	5	RIER			8							3				v 2	CUHULATIVE	COEF	3		œ	7	N 80
2 Z	101	>	-27	-33	1 3	- 28	-24		100	>	-27	-30	-35	-33	-31	9		OURIER	>	37	9 1	5	- 1	CUMU	OURIER	>	37	2.7	23	27
11 ME		5	-108	-117	-	. 0	-11			>	801-	-113	===	801.	101-				>	13	•	T 1	30			>	12	01	6 0	12
07152	-	ĭ	73.7	64.3	46.8	73.7	6.09		-	ī	73.7	68.7	1.89	9.69	0.89			-	ī	7.6	==	3.7	21.4		-	ī	7.6	10.5	8.0	12.1
> 0		SPEED	-	1 35	7.	129	128			SPEEU	137	136	135	134	133				SPEED	7	7	~ '				SPEED	7	7	7	7 7
	PEAKS	*	33	7	4.5	5	4		PEAKS	*	33	38	40	45	*			PEAKS		S	9	7	~ ~		PEAKS	3	5	1		• •
28.		>	-37	-51	-52	- 15	-51			>	-37	- 48	6 # -	5	7				>	11	53	ao :	3.0			>	1.1	22	- 9	23
		>	-130	6	-122	-122	-105			כ	-130	-124	-123	-123	-120				כ	5	15	ın :	26			5	S	=	o - o	25.0
HE 16HT		z	-	2		7	S			Z	-	2	۳]		- 1 °	7			z	-	2	. 3	. .0			z E	-	2	7 :	* 10

° °																																
E 101 51			Š	•	=	15	•	=			85	•	01	12	*	-																
START TIME 10: END TIME 10:11			ī	97.0	162.1	109.6	110.1	127.0			ī	97.0	132.5	123.6	120.2	121.4																
		-	SPEED	181	6 : 1	191	162	112		=	SPEED	184	*	153	156	6																
40 90.		WAVE FIT	3		•					WAVE FIT	3	- 18	•	=	-13	-15				ī	4.7	89.2	37.0	43.0				I	4.7	71.9	9.09	53.7
ų.		SINE	>	23	33	30	28	4.2		SINE	>	23	29	5.6	29	31			F11	SPEED	•	•	7 6	- F			F 1 T	SPEED	•	35	32	35
AIRFORCE			>	081-	20	0+1-	-135	-74			>	-180	-70	-97	-107	-101			MAVE	3	5	9	œ :	= 5			MAVE		7		5 :	- -
0715 A		-	30	38	73	7	20	55		-	30	38	57	15	5.1	21		S	SINE	>	31	68	36	0 4 0 0		S	SINE	>	3.1	9 0	52	5 2
•	5		20	4	27	46	7 6	15			20	4	37	+	37	39		VIATIO		5	c o	8 5	73	75		1 A T 1 ON		>	c o	121	108	101
9/19/16	ONE MINUTE MEANS	IENTS	ī	82.1	152.5	105.9	121.9	131.6	CUMULATIVE MEANS	IENTS	ī	82.1	120.5	114.8	116.6	119.2		MINUTE STANDARD DEVIATIONS	1 5	Ξ	0.8	88.3	39.6	19.7		CUMULATIVE STANDARD DEVIATIONS		ī	0.8	72.6	6.09	53.3
440	E MIN	COEFFICIENT	SPEED	135	7.1	8	88	5.0	ULATIV	FOURIER COEFFICIENTS	PEFD		000	4	6 9	8 7		E STAP	COEFFICIENTS	SPEED	=	60	6 0		•	STAN	COEFFICIENTS	PEED	=	35	30	27
U	ŏ	FOURIER C	3		0	0	-	0	5	LER C	3	_	. 0	0	-	0		LON! H	COEFF	3	-	-	-			ATIVE	COEFF	3	-	-	_	
TINE IN GMT		FOUR	>	-17	•	•	32	15		1007	>	-11	. ~	· v	12	15		ONE	FOURIER	>	8 1	19	27	45	2	INMOD	OURIER	>	1.8	4	-	45
1146			>	-132	1	-73	19-	-34			,	-132	- 5 6	-62	-63	-58			ŭ.	>	15	43	0	0,5			ŭ.	>	1.2	080	99	57
07152		-	ī	91.2	58.6	92.7	111.2	117.3		-	7		73.4						:	ī	13.7	7.5	12.4	16.6			:	ĭ	13.7	19.8	5.61	30.6
> 0 4			SPEED	175	132	172	168	66			SPEFD	175	152	160	162	151				SPEED	15	٦	0	23				SPEED	15	52	77	35
		PEAKS			36	47	9 7	a c		PEAKS			35	9	- +	36			PEAKS	3	23	9	18	+ 00	3		PEAKS	25	2.3	5 !	11	30
÷		۵.	>	•	.68		54	1.7		•	>	•	- 14	-11	0	•			u.	>	39	1 6	37	33	}			>	39	œ (3	5.00
			5	-171		-167	-153	- 68			2	-171	-138	651-	-150	-136				ח	1.1	1	00	38	;			0	11	33	30	- 8 - 7
- THE 16H1			z	_				S			2	_	- (7	S				z	-	2	3	* u	,			z E	-	2	3	n t
															В	- 1	8															

0 :51			_	•	3	3						-		3	13	•																	
10:10		5	-	•	-	-	-				SP	-	-	-	-	-																	
START TIME 10:10: END TIME 10:15:		ī	62.1	86.3	88.5	9.641	80.0				ī	62.1	73.3	82.4	47.9	0.56																	
	-	SPEED	124	120	101	101	108			=	SPEED	124	122	117	115	=																	
40 90°	WAVE FIT	3	9 -	-		-2	7			MAVE FIT	3	- 18	-15	-13	0	î				F	=	42.7	73.6	31.5				I	=	31.3	49.9	- 1 9	57.4
w	SINE	>	-55	01-	91-	40	-16			SINE	>	-55	-34	-28	01-	=			:	PEED	1	0	15	31			=	SPEED	7	60	13	15	8
OTIS AIRFORCE		>	-107	101	-52		7 0 1				>	-107	101-	181	-68	-12			MAVE	3				5 -			WAVE		r	1	6 0	•	01
▲ 2110	-		32							-					4		S		314	>	8	69	75	1,1		S	SINE	>	8 -	25	0.9	7.1	67
•		20	15	97	30	4	19				20	15	20	23	53	35	VIATIO			>	17	39	9 2	4 2	•	NOTTAL		ס	17	5.6	6 7	6.2	5.4
T VAD 9/16/76 ONE MINUTE MEANS	IENTS.	ĭ	56.7	11.5	1.16	147.0	84.3		CUMULATIVE MEANS	TENTS	ī	56.7	66.3	77.1	93.2	91.8	MINUTE STANDARD DEVIATIONS		_	ĭ	0.6	48.7	76.2	38.2		STANDARD DEVIATIONS		H	0.6	33.8	52.7	63.7	29.9
VAD MINI	COEFFICIENTS	PEED	9.5	7.3	95	53	67		ULATI	FOURIER COEFFICIENTS	PEED	9.5	19	7.3	89	99	E STA!		COEFFICIENTS	PEED	^	00	œ	12	:	STAN	COEFFICIENTS	SPEED	1	0.	12	15	51
U		3	#	-					5	1ER (3	7			-		HINU		100	3						ATIVE	COEFF		7	7	7	7	2
N GM	FOURIER	>	-45	-22	-:	54	-12			FOUR	>	- 45	-35	-27	-15	*	ONE		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	>	=	-	43	0 6		CUMULATIVE	FOURIER	>	=	30	36	4.5	-
1 H		2	69-	-52	-28	-	-54				>	69-	-62	-50	0+-	- 45		•		5	0.1	52	38	34			ĭ	>	0.	6-	3	36	34
01152	-	ī	59.2	56.9	78.5	54.4	81.5			-	ī	59.2	58.2	65.3	62.8	65.8		•	:	ī	12.7	16.8	2.55	21.0			=	H	12.7	14.2	34.5	31.8	37.5
9		SPEED	123	118	112	101	101				SPEED	123	121	1 1 8	-	-13				SPEED	S	7	- 18	33	1			SPEED	S	S	1.2	11	20
	PEAKS	3	1	9	0 +	58	32			PEAKS	3	1						2 2 4 2 0	CARS	35	r	7	*	30			PEAKS	35	•	•	0	17	2.1
28.		>	-61	19-	- 45	19-	7				>	-61	19-	-54	-56	-53				>	23	27	53	101				>	23	54	37	37	5
		5	-105	-95	-80	-73	-68				>	-102	66-	76-	-88	-85				>	1 6	71	0 .	n 00				>	16	8-	32	30	33
не 1 6 н Т		z	-	7	3	7	S.				Z	-	7		э В	م - 1 9)			Z	-	7	۲.	۰.				Z	-	2	3	*	•

<u>.</u> .	5																																		
101101	161101		4	=	0	0	0	0				S	-	: =	=	=	=																		
START TIME 10:10			ĭ	126.0	•	•	•	•				I	124.0	126.0	126.0	126.0	126.0																		
12			SPEED	41	0	0	0	0			_	SPEED	67	97	44	41	41																		
.06 дн		WAVE FIT	3	6	0	0	0	0			SINE WAVE FIT	3	0	0	6	•	î				Ŧ	23.0	•	•	•	•			1	-	23.0	23.0	23.0	23.0	The same of the same of
щ		SINE	>	55	0	0	0	0			SINE	>	55	5.5	55	55	55			111	SPEED	0:	0	0	0	0		F11	CPEFO		0 :	2 .	2 .	00	
IRFOR			>	-13	0	0	0	0				>	-73	-73	-73	-73	-73			WAVE	3		0	0	0	0		WAVE	3		7 .	7 .	7 .	12	
OTIS AIRFORCE		-	30	19	0	0	0	0			-	30	19	14	19	79	7.0	<i>u</i> 2	•	SINE	>	35	0	0	0	0	s	SINE	>	. :	35	5.		35	
٠,	s		20	7 00	0	0	0	0				20	00	60	8	4	*	011417			>	20	0	0	0	0	IAT 10N		=		20	0 0	200	50	
9/16/76	ONE MINUTE MEANS	IENTS	į	134.8	0.	0.	0.	•		CUMBLATIVE MEANS	ENTS	Ŧ	134.9	134.9	134.9	134.9	134.9	SHOUTELVED DRAGNATA			Ŧ	25.8	•	0.	0.	•	CUMULATIVE STANDARD DEVIATIONS	-	3		8.57	9.67	9.67	25.8	
٨٧	E MINU	COEFFICIENTS	SPEED	5	0	0	0	0		ULATIV	FOURIER COEFFICIENTS	SPEED		5.1	_	_	_			COEFFICIENTS	PEED	01	0	0	0	0	STAND	COEFFICIENTS	0.500		0 0	<u> </u>	2 5	2 2	
5	0	FOURIER C	3	0	0	0	0	0		COA	PIER C	3	0	0	0	0	0	T IN		COEFF	3	0	0	0	0	0	ATIVE	COEFF	3		0 0	> c	> 0	00	
TIME IN GHT		F 0 U	>	36	0	0	0	0			1001	>	34	36	36	36	36	200		FOURIER	>	22	0	0	0	0	COMUL	OURIER	>		77	77	"	22	
7 I H			>	-30	0	0	0	0				>	- 30	-30	-30	- 30	-30				>	60	0	0	0	0			=		ю с	D 0	D a	6 6 0	
07152		-	Ŧ	88.1	0.	0	0.	•			-	ĭ	88.1	88.1	88.1	88				-	ĭ	75.5	•	0.	0.	0.		-	1		4.67	10.0	010/	75.5	
٥ • •			SPEED	68	0	0	0	0				PEED	6	68	6 8	68	6				SPEED	27	0	0	0	0			0 4 3 4 5	,	17	17	,,,	27	
		PEAKS	3	9-	0	0	0	0			PEAKS	2	9			9-				PEAKS	S	23	0	0	0	0		PEAKS	3	,	57	23	22	23	
;			>	1	0	0	0	0				>	1	1	~	1	-				>	41	0	0	0	0			>		, ,	67	0.1	10	
			>	-38	0	0	0	0				5	- 38	-38	-38	-38	-38				כ	53	0	0	0	0			n	0	47	200	7	2.5	
HE 16HT .			Z	-	7	٦	7	5				z	-	. 2		* R	ية 21 - 21	0			Z	-	7	3	5	S			2			, ,	1 3	run	
																1	- 61	0																	

	10:15:			20	16	13	1 -	<u>.</u>					40	•	2 :	- :	7 7																	
	START TIME 10:15 END TIME 10:20:		•	Ξ.	142.3	80.5	196.5	10001				1		5.751	7 . 10		95.5																	
.06	EN	WAVE FIT		2				911 6-			=	9	i -			, -	3 115			1			•		0.3				ı					. •
H												3				•	•			٠	- 5	0 4	0	-	70				F	3	4	13		9.59
RCE		SINE						-		2 1 2	3116	>	0	-	. 1	-23	7		113	SPFF		2.2	10	^	21		111		SPEED		74	54	2.7	12
AIRFORCE			=		0 1		60	-55					- 34	-5.2	1 1	109-	-58		2 > 4 3	3	1			0	0.		MAVE		3	1	=	: =	12	Ξ
0118		-	2	3		900	7 8	57		•	•	30	3	5.0	00	45	4	S	N I S	>	ď	7.1	0	3.8	8.2	S	SINE		>	8 5	11	19	7.5	11
176	S		30	42	2 0			1 0	10			20	42	39	39	35	39	DEVIATIONS		>	5.5	19	0	6-	7.5	IATION			2	55	7.2	7.2	99	67
9/19/16	UTE MEANS	CIENTS	ī	141.7	83.1	0 2 0	52.9	106.3	IE MEANS	IENTS		I	141.7	96.1	105.9	9.06	6.56	STANDARD DE	S	H	51.9	61.5	0.	16.3	10.6	STANDARD DEVIATIONS	2 5		I	51.9	62.0	1.99	6.09	65.9
VAD T	ONE MINUTE	COEFFICIENTS	SPEFU		64	0 3	9 8	95	CUMULATIVE	COEFFICIENT		SPEED	5.4	9.5	7.9	10	8.9		COEFFICIENT	SPEED	3	*	0	9	11		COEFFICIENT		4	3	-	-	9 !	91
J		FOURIER	*	0	0	0	-	0	5	FOURIER		3	0	0	-	-	-	MINUTE	COEF	3	0	-	0	0	-	ATIVE	COEFF		3	0	0	3	~	2
E IN GHT		F00	>	35	7	0.5	-50	7		FOU		>	35	-	7	-12	80	ONE	OURIER	>	3.0	4.5	0	2.3	47	CUMULATIVE	OURIER		>	3.0	4+	4.7	47	t t
1 1 ME			D	-25	-37	1.2	19-	-28				Ð	- 25	-35	-30	0+-	-36			D	35	+	0	æ	0		•		D	35	38	3.6	37	3.7
01152		-	ī	6.59	82.5	44.5	0.44	82.4		-		I	6.59	78.8	15.4	4.99	71.8		1.	I	21.6	74.3	0.	3.0	1.09				I.	21.6	2.59	6.79	24.0	25.1
VAD			SPEED	6.5	125	119	140	108				SPEED	66	150	150	125	120			4	32	57	0	5	34				a a	32	27	57	23	17
		PEAKS		5.0	77	7.0	x T	16		PEAKS		č	5.0	77	17	33	51		PEAKS	₹ SP	œ L	35	0	-	0.5		PEAKS	103		200	37	5	3.3	3 6
28.			>	* * * *	65-	# a	001-	-31				>	7 1	7	1	0 9 -	15.			>	9	107	0 .	•	76		۵.	5	4 17	0	0 3	0 4	10	
			2	7 0 1	J.D	00	96-	4				>	± 0	129			0			0	6	o- c	0	0 -	-			13		2 .	50	10	0 7	2
HE 1 GH 7			NIN	-	2	6	*	S				2 .	-	7			-21			N .	-	7	7 3	- 1	0			2			7	2	- 5	,

...

	10:25: 0				+	13	15	15	* 1				4	7		7	* *																		
	Ī			90									2																						
	START TIME END TIME			- 6	48.	89.	81.	59.	54.7				-	98.	6 9	8 6	76.6																		
	EN	-	٥	מביר בים	171	130	142	143	140		-		7	127	671	55	136																		
но 90.		WAVE FIT				-	1	-15	8 -		WAVE FIT			9 0	0 0	-	- 15						7.7/	00.00	12.3	10.4						72.5	1.00	6.00	7 7
1.1		SINE W	>			. 33	7	-67	-78		SINE	>	•	- -			-47			_		- C		- 4	0	13				4	2 1	0 0			7
AIRFORCE		01		- 4-		. 7.5	.8.	21	1.2		8	-		19-						VE F11	Ü	5	2 1	10					114 3	900	0	2 5	. ~		. 0
		-		, 46							-									JAVE 3									FNAVE						
0115			-									-	2	36					1045	SINE	>	-		a ac	1.	- 1			SINE	,		95	8.3	7.3	6.7
9/16/76	SNI		20	3.7	. 3		.,	45	2 *	S		20	, ,	7 7	37	7 7	32		DEVIATIONS	_	3	, 6		7.4	30	20		DEVIATIONS		2	63	72	11	65	09
9/1/6	ONE MINUTE MEANS	1ENTS	ĭ	102.6	7 7 7			7.70	48.5	CUMULATIVE MEANS	ENTS	Ξ		0 7 . 7	89.0	81.8	75.5		ARD D		ī	70.2	60.6	63.4	+	13.8		HO DEV	-	ī	70.5	63.2	91.9	54.1	9.09
V A D	H 12.0	COEFFICIENT	EFU	15	1.2	, ,	9 0	0	9 6	LATIVE	CUEFFICIENT	0		740	18	D 80	9.1		STANDARD	11.175	3	90	0.1	-	51	0		STALDARD	18:175	0.33		13	,	7	+
	ONE	~	35	_	0		, ,		-	CUMU		SPE	_		_	-	~		MINUTE	COEFFICIENT	3,45		-	2	_	_			COFFFICIE	S	-	_			
GM 7		FOUNTE		τ					2		FOURTER				^		_		014E 111	r								CUMULATIVE	2						
11me 1n												>	•	-	-	- 2	.3			FOURTE	>	S	7	4.7	-	~		no	FOURTE	>	5 5	6 7	*	4.5	,
			3	05.	771	-53	174		6			כ	04-	-42	951	-53	-55)	0.4	0.5	45	17	,				0	7.5	3.8	()+	37	3.3
01152		-	ī	113.9	59.6	20.05	19	. 0	•		-	I	113.9	1.68	13.8	70.4	9.4			-	I.	78.6	34.4	~ ·	0.				-	111	78.6	65.3	24.1	46.5	1.7.
OVA			PEED	130								and a	130	133	137	. 241	5 6 7				ELU	23	11	α	2					1.6					
		AK S	٠,	•	15	1 1	5	0.7			PEAKS	30	1.6	35	33	! +	÷			FEANS	-0	5	9	c	71	0			,° × 4			3.7			
		1	>	13	07-	26-	-73	-111			1	>	1.3	-31	-2.1	-127	79.			1		23	,		v .				13.4		23	102	E -		5/0
	•		7										,		~	5						-	-	•	0 -							5.3			
HE LGHT				_										¥	•		'	2						-1											

	0 0																																	
	0:40:		9.5			13	2.1	50				9		£ .			o c																	
	END TIME		ī	64.3	70.3	72.2	51.9	80.7				2		2.50	0.04	3 . 3 .	67.4																	
• 0	EN	FIT	SPEE	9	17	17	16	191			F11	0 3 3 6 5		101	173		170																	
H 0 4		WAVE	3	-21	-23	-21	- 8	- 15			WAVE	3		132	-22	- 21	-20					•		4	6.8.5							7.6	13.0	30.6
G.		SINE	>	-72	-56	-52	- 9 B	-56			SINE	>	-73	. 4	-60	-7:	- 68		F11	9 2 9		n .	-	, ~	1			111	0 3 3 4 5	1	n 4	o o		1
AIRFORC			n	-151	-165	-162	-126	-87				2		201	-159	-150	-138		WAVE		ָר	٠,	• •	S	1.2			MAVEF	3	,	٠,	. ~	7	1
0118		-	30	13	7	16	23	9			-	30	-	7	*	17	1.7	S	SINE	>	•		3.5	3.8	0 1		2	SINE	>		- 2	212	31	7
176	S		20	12	6	٥	22	35				20	13		0	13	1.1	DEVIATIONS		-	0	· a	ao	30	96		IAT ION		2	,		0	23	15
9/16/7	MINUTE MEANS	CLENTS	H	59.2	63.5	6.59	50.8	74.6		CUMULATIVE MEANS	IENTS	Ŧ	5.65	61.5	65.6	59.6	62.4	STANDARD DE	5 1	1	3	2.0	10.0	12.6	1.99		STANDARD DEVIATIONS	S 1	ĭ	3		9.9	0.01	29.6
VAU	ONE MIN	COEFFICIENTS	SPEED	145	740	144	130	122		HULATIV	COEFFICIENT	SPEED	_	7	142	139	136		COEFFICIENT	Cards	1	. 3	Ŋ	10	'n			DEFFICIEST	9	,	•	S	•	=
5 -	0	OURIER		8 -	6-	91	=	•		5	31 %		œ	6	α -	9.	1	HINOTE	COEFF	*	_	. 3	•	3	4		CUMULATIVE	COFFF			. "	3	S	•
1 0 0 H		00	>	-71	- 62	-51	-14	-5-			100	,	-71	-69	-63	89-	79-	ONE	OURIER	>	α	·	23	51	15		כחשחה	OURIER	>	α	œ	,	11	34
1146			o	-121	-125	-129	0	99-				o	-121	-123	-125	811-	-108		•	2	-		10	22	19			•	2	-	9	•	æ —	36
07152		-	ĭ	71.6	6.89	73.4	11.5	73.0			-	ĭ	71.6	70.2	71.2	71.2	71.6		-	I	3.2			6.9	13.2			-	11	3.2	8.3	3.5	9.0	o.
047			SPEED	171	115	173	4	172				SPEED	171	172	172	171	171			073		~	5	1	0.1				EED	1	S	S	•	7
		 FARS		7	n F	£ :	5.5	0.0			PEARS		7	0 5	0 5	*	15		EAKS	3 5 5	S	0	,	-				FEA.S	35	20	c	S	T	2
24.			>	.53	09-	E						>	-53	-56	75.	-53	-54		a.	>	10	3.1	5.6		0			7		D	22	5.3	17	. 7
*			2	- 9	5	e .		0				5	191-	-156	0	4	40			ח	6	*	1.2		1				17	>		-	-	71
n£ 16H1			z E	-	7	7 ,		n				11111	-	2		3	. 2 3			2 1		2	•	· .	n				ити	-	(N	*	,	'n

10:40:0																															
		8	-			-					SP	-	13	13	==																
START TIME End time		ī	186.7	100		7.001	204.7				Ŧ	186.7	188.2	177.2	185.0																
		SPEED	163	1 20	134		30				SPEED	_	- 4	136	2 ± 5																
2	WAVE FIT	3	-	• •			9 2			WAVE FIT	3	-	2	-	7-							69.0	74.7	•			1			88.6	
,		>	4 6	27	0		27			SINE	>	7 0	9	09	9 6 7			111		משבים	20	63	139	o		111	4		70	99	9
		>	-		- 1		12				2	-	2	7	-5			WAVE			7 00	45	89	0		WAVE	2		9	65	7
-	-	30	43	7	7 7		50			-	30	43	43	0.7	43		S	SINE		, J	1 8	100	191	0	5	SINE	>	154	135	121	
s		20	99	99	7 4	75	0.9				20	99	99	9	67		DEVIATIONS			, ,	69	16	38	0	ATION		5	4.7	65	74	. 7
ONE MINUTE MEANS	LIENTS	ĭ	155.1	124.4	131.6	174.0	181.4	0 2 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C 12 4 3 1	IENTS	ī	1551	139.8	136.8	144.7		0	1 5		70.4	88.2	77.8	4.1	0.	CUMULATIVE STANDARD DEVIATIONS	5 1	ī	70.4	77.8	75.7	0.07
NE MINUTE ME	COEFFI	SPEED	121	9	011	-	9		410	COEFFICIENT	SPEED	121	118	115	115		E STANDAR	DEFFICIENT	2 2 2 2 2		: =	0	0	0	STAND	COEFFICIENT	9	-	0	0.1	
0 0 8 1 E 8			7	0	C	-	0	Ē	2	OURIER		7	0	0	00		BIUNIA	COEFF	3	_	. ~	2	-	0	ATIVE	COEFF	•	_	. 2	7	2
00 4	•	>	85	35	7	-	9			FOU	>	82	09	54	6.9		ONE	OURIER	>	9.2	113	66	œ	0	CUMUL	OURIER	>	65	105	100	00
		2	7	7	<i>T</i>	6-					ח	7	0	5	9 5				-	18	20	43	20	-		٤	5	80	0	30	2 11
-	-	I	116.9	0.46	60.7	110.3	7			-	7	116.9	105.4	98.9	43.4			:	1	44.7	0.65	28.8	6.94	•		-	Ŧ	44.7	46.3	45.6	45.1
		SPEED	171	J	150	~	12				SPEED	171	159	156	152				0	1	6 7	28	0	5			PEED	3.2	7	36	33
PEAKS		x	34	1	21	1	-85			PEAKS	r	34	20	7	r +			PEAKS		33	26	3.6	0 :	5		PEARS	. 5	39	æ	7	37
		>	10	.5	-71	17	30				,	œ -	7	71-	~ ~				,	7.3	93	15	7.0	,			>	7.3	90	0.	9
		Ð	971-	+01.	,	101-	* 0 1				⊃	-128	0 :	5	211-				7	06	14	52	7.3	9			D	06	78	99	99
		z E	-	7	~	7	S							7 :	3-2	4			z E		7	£	* 0				21 11	-	2	3	7

10:42: 0			SP	24	13	- 2		2			SP	3.4			1.1	91														
1146				129.2	176.0	6.46	154.1	156.2			ī				140.5															
END	-	- 1	SPEED	171	130	179	145	14		-	SPEED	171	7	158	155	1 60														
	WAVE FIT			9-	11	-20	1 1	-58		WAVE FIT			2	7	1	•				4 . 6	86.1	62.6	54.0	5.76		ĭ	83.6	84.9	81.8	
	SINE	:	>	58	45	۳		165		SINE	>	29	37	27	3	10		F11	200	7	31	23	151		111	SPEED	۰	31	32	
			>	-30	61	- 98	- 47	60			>	- 30		-33	-36	-35		MAVE			3.8	c o	35	c n	WAVE		=	58	27	
	-		30	22	32	24	3	5.8		-	30	22	28	27	31	37	SNI	SINE	>	. =	9.6	146	001	-	SINE	>	-	-	122	
S		,	70	26	59	52	74	9 0			20	2,4	9 60	2.6	09	9	VIATIO		:	115	9.5	11	59	0 1		>	115	102	103	
MINUTE MEANS	LENTS		Ξ.	122.0	148.2	88.3	6.941	130.4	CUMULATIVE MEANS	1ENTS	Ī	122.0	136.1	121.0	127.2	127.9	STANDARD DEVIATIONS	s	1	87.9	82.3	71.9	59.5	STAHDARD DEVIATIONS	5	I	81.9	82.4	80.5	
ONE MINU	COEFFICIENTS		1	611	122	109	100	117	ULATIV	COEFFICIENTS	0	119	121	117	115	115		OEFFICIENT	4	,	=	9 1	5		COEFFICIENTS	PEED	c 0	01	13	
ó	FOURIER			0	0	-	-	0	00	OURIER	3	0	0	0	0	0	MINUTE	J	3	2	3	7	~ ~	CUMULATIVE		×	2	3	7	
	104		>	80	4 6	-22	7	9		F01	>	•	28	12	27	<u>.</u>	ONE	OURIER	>	101	112	16	7 60	3 3	OURIER	>	101	101	101	
			0	-17	•	-51	-21	-12			ס	-17	7	61-	-20	-			2	7.1	4.8	6 7	22	:	•	5	7.1	20	29	
	-		I	67.7	63.5	78.0	57.4	119.2		-	ī	67.7	65.4	4.69	66.7	1.87		-	1	10.6	19.0	33.7	26.0		-	I	0	15.2	2	
			SPEED	173	160	169	145	137			SPEED	173	166	167	162	150			0 3 3 4 5		3	2	30	?		SPEED	œ	0	3 0	
	PEAKS			0.7	2.6	15	38	*		PEAKS		7	5.3	25	6 5	-		PEAKS		7	œ	*	- 1		PEAKS		12	0	=	
. 8 .		,		-63	99-	- 35	69-	17			>	-63	-66	-56	-54	-			,	52	œ	83	5.5		•	>	52	99	2.0	
		:	5	-157	-136	0+1-	-112	69-			0	-157	5	***	-136	-			0	50	9	53	# W			5	20	7	17	
3				-	?	7	*	S			 	-	~	3	7.	n 3 -			2	-	2	3	*			Z ·	-	7	7	

° °																																		
10:40			9			0		•			ď	0	0	0	0	~																		
START TIME 10:40: END TIME 10:45:			1	0.				185.9			ĭ	0.	•	•	0.	185.9																		
		1.1	SPEFO	0	· c	0 0	c	5 6		111	SPEED	0	0	0	0 0	67																		
H0 90		WAVE FIT	1		0	3	0	67		WAVE F	3		0	0	0 .	•				Ī	•	•	•	•	26.3				ī	•	•	0.	0.	26.3
3		SINE	>	0	0	0	0	2.7		SINE	>	0	0)	0;	/ 7			-11	PEED	0	0	0	0	61			F11	SPEED	0	0	0	0 -	-
AIKFORCE			2	0	С	0	0	1			>	0	0	0	0 •	•			MAVE	3	0	0						WAVE F	3	0	0	0	0 -	=
0115		-	30	0	0	0	0	7 0		-	30	0	0	0	0 1	c	NS N		SINE	>	0	0	0	0	1.7		2	SINE	>	0	0	0 1	0 -	-
9 7	?		30	0	0	0	0	4	10		20	0	0	0	0 3	-	VIATIO			>	0	0	ס	0	15		NO. 1		כ	0	0	O 1	0 4	<u>-</u>
T VAD 9/16/76		IENTS.	ī	•	0.	٥.	0.	174.0	CUMULATIVE MEANS	IENTS	ī	٥.	•	0.	0.4.1		MINUTE STANDARD DEVIATIONS			ī	0.	0.	J.	0.	2.0	COLUMN AND AND AND THE STATE OF	1000		ī	7.	0.	•		• n
0 4 1		FOURTER COEFFICIENTS	SPEED	0	0	0	0	132	TULATIV	FUURIER COEFFICIENTS	SPEEU	0	0	o :	2		E STAN		COEFFICIENTS	PEEU	0	0	O	0	•		0	COEFFICIENTS	PEED	0	0	0 0	> •	
GH1 CT	•	JRIER	3	0	0	0	0	0	100	HIER	3	0	0) E	,				3		0				20114			×				- 0	
z_		0	>	7	0	0	0	131		FOL	>	=	0		131	:	ONE	0.000	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	>	0	O	0	0 :	=	1		FOURIER	>	•	0	2 0	=	
1 1 n E			D	0	0	0	0	-15			0	0	0	0 3	-15					5	0	0	3	0 :	-			•	0	n	0 0	o r	13	
01152		-	ī	0.	0.	0.	٥.	70.5		-	ī	0.	0 :		70.5			•	•	11	0.	0.	0.	0 .				-	H	0.		•		
A >			SPEED	0	0	0	0	138			SPEEU	0	0 :	0 0	138					EED	0	0	7	٥.	0				6.0	0	00	0 0	1.5	
		FEAKS	3	0	0	20	0	•		PEAKS	×	2	c :	0.0				5 3 7 3 6		A SPEE	0	0	2 5	2 -	-			F A K S	. SFEE	-	0 0	2 =	13	
÷.			>	5	ت	o :	0	-			>	0	00	0 =	. 4.			1			0	0	0 0	2 -	;			-		0 0	00	0	17	
			5	5	-	J :	2	171-			5	7	> :		-128					5	7	0	2 5	2.0	3				0	0.0	2 3	0	2.5	
н£ 1 6н 1			z E		7	n 3		n			z I			В	-2	26				21 11	-	~ -	7 .	5					: I u	- 1	٠, ٠		70	

0:50:0			SP	-	10	,	Œ		2				SP	=	= '		• •																			
START TIME END TIME I			H	173.5	199.3	200.6	229.9	223.5					Ŧ	173.5	187.6	195.4	2007	6.607																		
		11		145								11.	SPEED	145	172	176	9 :	00					٥	7		n -						•	+ (- 0		n
40 40.		WAVE FIT	3	22	4			0 0	ζ,			WAVE FIT	2	22	13	5 .	21	77				I	6.06	70.		12.					ī	•06	77.4	7.2	7 .	
		SINE	>	50	136	2		;	Ξ			SINE	>	90	96	101	6 6	4.5			=	SPEEU	7.0	73	0.6	9 4				FI.	SPEED	10	73	י פ	10	
			n	6	10.	071	n .	5 0	- 34				כ	6-	- 18	- -	-15	- 1 6			WAVE FIT		43	8.9	101	5.5	:			HAVE		43	6 9	9/	0 0	01
		-	30	5.2				63	7			-	30	5.5	19	99	9	99		5.	SINE	>	144	156	111	600		J	1	SINE	>	7 7 -	150	154	9 5	5
			20	7.4		4.5	,	9 8	16				20	7.4	8.5	88	88	80		IATIO		>	4 00	62	0+	15	0	2			כ	5	69	5 6	57	15
	ONE MINUTE MEANS	LENTS	1		, , , , ,	171.0	176.5	173.6	174.0	PNATH ROLL BURE		1ENTS	I	146.7	160.0	165.8	167.0	167.9		MINUTE STANDARD DEVIATIONS		Į.	75.0	5.3	6.8	7.6	· · ·	SHOTT AND REAL PROPERTY.		1 51	T.	75.0	49.2	40.	37.0	34.7
1	IE MINU	COEFFICIENTS	00000			150				2	OLA!	FOURTER COEFFICIENTS	SPEFU	124	121	123	124	124		TE STAN	COEFFICIENTS	SPEFO		13	1	no i	77		2	COFFFICIENT	SPEED	=	1.2	7	1.2	13
	0	FOURTER				7	_	-	7	ŧ	5	H IE R	3	0	0	0	0	0				3	2	-	Ξ	C	-	;			3	2	2	-	-	-
		FOU		> 1	9/	114	124	129	124			FOU	>	14	6 6	108	=	113		ONE	DURIER	>	101	-	15	=	54			FOURTER	>	101	12	2.5	52	25
			:	0	,	-17	٠٠	-13	0				=	7	-		01-	0 -			•	=	22	n	18	20	58			-	n	22	1.7	1.7	11	-
		-		ı	148.3	89.5	46.0	103.5	71.9			-	2		1.6.2	0.00	106.4	101.9			-	-	5.64	2.19	26.3	54.3	14.3			-	=======================================	69.5	6.89	57.9	56.0	53.6
				SPEED	7 -	142	139	2+1	9 7					2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7 3	1 4 2		147				9		2	0	0-	-				01145	A N	2.0	11	1 4	1.5
		PEAKS		<	9-1	2.0	•	-	3.2			PEAKS			c -	n .s	7	10			PEAS S	,	, ,	27	1	24	Ξ			PEAKS			J ()	4.3	7	1.5
		2		>	53	-12	2	13	-			1			5.5		-						,	100	27	100	35				>	0	101	2 2	85	79
97 *				2	- 34	18-	171	1111	-135						7	0 0		- 35						7.11	2.5	29	23				-		2 2	11	13	7.0
HE 16H1				= = =	-				· vo					2				ь _в	27					- [S						- ~	. ~	,	uti

0 0 :																														
11:50		SP	-	17	22	- 1			92	•	20	21	22	21																
START TIME End time		Ŧ	85.0	2.46	65.5	59.9			1	85.0	89.3	80.2	85.0	80.3																
	-	SPEED	191	165	6 9	170		_	SPEFD		163	171	173	173																
40 4 0	WAVE FIT	3	• •	::		- 1		WAVE FIT			80	-	0.1-	-15			1		72.3	31.2	40.8	3.6			I	0.49	65.2	55 . 1	52.8	48.5
SC E	SINE	>	-27	07-	0	9 9		SINE	>	-27	-24	0+-	-25	-36		F17	200	7	· u	12	12	•		113	SPEED	0	œ	<u> </u>	9 .	-
AIRFORCE		> !	-87	0 3	1 1	4 4			ס	-87	-83	901-	-112	-119		WAVE	3	. =		. ~	13	7		3	1	=		=	= :	=
0118	-	30						-	30	2.1	8-	1 9	20	00	SNO	SINE	>	127	132	06	108	0	SN	SINE	>	127	124	112		105
4 N S N		20	33	\$ 2	5 2	9 00	s		20	33	53	27	28	54	EVIATI	_	=	7	9 2	33	6.7	1	VIATIO		2	9 5	7.2	99	99	9
T VAD 9/16/76 ONE MINUTE HEANS	LENTS	Į.	5 . 5	0.77	8.70	0.09	CUMULATIVE MEANS	TENTS	I	84.5	88.3	78.6	82.9	78.6	MINUTE STANDARD DEVIATIONS	S	1	43.0	73.4	31.5	38.3	7.8	CUMULATIVE STANDARD DEVIATIONS		ī	63.0	65.2	55.3	9.75	
VAD ME MIN	FOURIER COEFFICIENTS	SPEED	129	0 0	C	157	TULATIV	COEFF 1CIENTS	SPEED	-	132	137	140	143	E STA!	COEFFICIENTS	Speed		. ~	12	36	•	STAB	COFFFICIENTS	SPEED	01	۰	12		<u>}</u>
GM1 C1	JHIER		0.	- 0			Ď	FOURIER			0.1	13	-13	4					17	, 7	=	•	LATIVE			15	91	13	5 .	-
z -	0	>	- 28	77-	500	-77		0 4	>	-28	-26	0+-	-26	-36	ONE	FOURIER	>	0	104	7.0	101	•	COM	FOURTER	>	66	66	90 0	5	6
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		3	7/-	-		-135			0	-72	-47	- 83	- 30	8			_	5	7.3	5.6	4.5	7			כ	53	90	53	75	0
01152	-	ī	5001		48.9	61.6		-	ĭ	110.5	86.5	74.5	73.4	71.5		-	ī	83.1	21.6	7.2	40.3	11.7		-	H	83.3	66.3	53.8	50.05	
A >		SPEED	5 .		0 -	159			SPELD	145	143	155	160	091			0.00		0	no	5 -	•			PEED	1	0	12	0 0	0
	PEAKS	,	- 1			+ 1		PEAKS	r	1	28	34	35	B C		PEAKS	3,5	7	1	1.2	13	S		PEAKS	. 5	5 +	36	32	3.7	
28.		>	7.7	201	5.5	-74			>	O	-34	95-	-56	0			,	123	6+	9 !	116	30				129	104	2 2	2 4	
		5		27.1	-135	-136			0	-35	-16	-38	501-	=			ח	19	3.2	9	27	-			n	19	15	99	20	16
HE 1 GH 1		Z .		۳ ۳	7	.S			21 2	-	2	•	В	n -28			2	-	2	3	3	S			2	-	2	~ 3	· u	

0:05						_																								
11:50:		8		7	25	-	13	5			SP	20	23	20	18	-														
END TIME		1	10.		78.1	78.1	82.3				ī	70.4	74.6	75.7	77.3	75.3														
E N N	11	SPEFD		957	253	274	263			F17	SPEED	238	246	552	257	258														
	WAVE FI	3	- 2.	7	-	-22	-20	3		WAVEF			6 -	-20	-20	-20			ī	8.0	15.4	1 • 2	18.0			Ī	9	12.7		
	SINE	. >	-17		4	- 55	60			SINE	>	-11	-62	09-	-55	-62		F 1.7	SPEEU		٥	7	30		F.1.1	9660		`=	: -	
		ם	-221		- 534	-267	-255				>	-221	-231	-242	-245	-243		WAVE F	3		=	7	12		WAVEF	S	ı	0	7	
	-	30	•		= '	~	2 7	2		-	30			80			45	SINE	>	31	62	·s	50		SINE		~	0 6	=	
s		20	α		0	S	v a	2			20	00	7	=	0	=	DEVIATIONS		>	7	23		31 56	147100		>	*	2 1	24	. 7
ONE MINUTE MEANS	1ENTS	ī	48.0		1.//	15.8	0.08		CUMULATIVE MEANS	IENTS.	ĭ	68.0	72.9	73.8	75.3	72.8	0	2	ī	8.6	0.91	9.1	15.1	STA DARO DEVIATIONS	-	ī		13.5		
E MINU	COEFF ICIENTS	PEFU	0		507	9+7	242	;	ULATIV	OUKIER COEFFICIENTS	SPEED	88	181	212	220	222	E STANDAR	COEFFICIENT	0	13	97	00	92	5 7 4 10	COEFFICIENTS	<u>س</u>		22	3.8	
0	OUMIER						6 -		50	CIER C			11	6	6	<u>x</u>	MINUTE	COEFF	3	1	=	7	12	CUMULATIVE	COEFF	3	1	. 0	a.	
	100	>	84.				1 4 5			FOU	>	-63	-54	-51	124	-63	ONE	OURIER	>	2.3	54	5	9 7	CURU	OURIER	>	23	43	35	
		ס	-172		741-	-43/	-233				>	-172	-183	-200	-208	707-		•	5	61	27		5.4			5	6-	25	33	,
	-						19.7			-				15.8				-	H	1.1	10.4	3.7	9.9		-	ī	7.7	0.6	8.2	
		SPEEU	146		657	5/7	197				SPLEU	947	757	657	197	497			ELL	ė	,	٠,	3 80			660	c.	13	1.5	,
	PEARS	2				,	÷ 0			PEAKS			5.5	25	2.	75		PEAKS	* SPEE	0	5:	,	•		PEAKS	a SPEE	0	13	2	
		,	09-			1	3 7				>	09-	- 64	79-		76.			,	34	J .	2 :	31			,	34	33	34	
		n	-235	- 36-	1000	100	157-				Þ	- 535	-238	842-	057-	162			5	1	7.7	0 :	0.7			>	1	16	20	-
		2	-				r in							~ :	,				2	-		2 3	· in			нІп	-	2	٠	,

	START TIME 11:50: 0			SP	79	23	9.	25	54				SP	79	52	22	23																
	START TIME 11:50			Ŧ	0.66	69.8	20.1	65.3	102.5				Ŧ	0.66	85.5	73.3	77.																
•	ST	;	111	SPEED											163	991	169					2	6 0 P							٠ ي			. ~
HO 90			WAVE FIT	*	••	=	-15		0			WAVE FIT	3	•3	9-	6	0 1				ī									30.5			34.2
CE			SINE	>	23	- 49	-105	-67	36			SINE	>	23	-	- 43	9 5	;		111	SPEED	=	0 3		•		11		SPEED	= 5	12	: :	12
OTIS AIRFORCE				>		-113	-128	7 7	-165				>		-128	-128	-132	2		WAVE	*	0.1	7 0		:=		NA VE		3	<u> </u>	• •	0	0.1
0115			-	30	71	25	<u>+</u>	1.1	54			-	30	21	22	20	6-6	2	SNO	SINE	>	19	100	7 6	2.6	S Z	SINF		>	79	9 6	8	06
176		SN		20	Ŧ	30	15	58	45		o		20	7	36	78	53	;	DEVIATIONS	_	>	31	7 0	3 8		VIAT10			>	3.	3.5	: :	33
9/191/6		ONE MINUTE MEANS	IENTS	Ŧ	6.56	70.2	51.3	64.9	97.6		CUMULATIVE MEANS	IENTS	Ī	6.54	84.0	72.6	70.8	0	DARD D	s	ī	30.7	44.0	28.5	16.2	CUMULATIVE STANDARD DEVIATIONS	,		H	30.7	38.3	11.	32.4
VAD		E MINU	FOURIER COEFFICIENTS	SPEED	125	129	153	151	136	•	101710	FOURIER COEFFICIENTS	SPEED	125	127	136	139	· ·	MINUTE STANDARD	COEFFICIENTS	SPEED	15	-		23	STAUC	10151		SPEED	12	- 6	2	50
12		6	SIER C	3		12	15	10	. ~			41ER	3		1	01	0.	0	DNIE	COEF	3	•	•	• =	0	LATIVE			1	•	œ o	. 0	10
IN GHT			FOU	>	,	-51	-92	09-	2			100	>	1	-20	- 45	4 .	2	ONE	FOURIER	>	9 9	72	63	7	OHOU	STARTOR STARTOR		>	99	68	0 7	9 2
TIME				>	-109	-93	-111	-122	-129				>	-109	-102	-101	= :				>	30	33	9 7 6	, <u>-</u>				>	30	3.	? =	30
07152			-	ī	63.5	63.5	69.0	63.1	65.3			-	ī	63.5	63.5	6119	62.2	6.70		-	ī	19.3	10.3		12.1		-		Ŧ	19.3	15.2		13.4
VAD				SPEED	991	154	178	181	183				SPEED	166	091	991	170	7/1			SPEED	13	~	0,7	9				SPEED	13	12		
			PEAKS		4.7	36	95	00 #	8.0			PEAKS	2	47	4.2	47	47	0		PEAKS	35	•	9 :	0 4	13		5 4 4 5 9	1		0			13
	28.		•	>	19-	19-	-88	-19	-15			•	>	-67	-67	-74	-75	c/-			>	53	97	9 6	37				>	53	- ;	9 00	3.8
				5	141-		8+1-	-157	-162				>	7-1-	-138	7-	-145	,			0	5.2	= :	2 1 2	- 2				כ	52	6- 6-	23	23
	HE16H1			Z	-	. ~	7	3	ď				Z	-	2	•	В	- 31	0		Z	-	2	7 3					Z I E	-	7 -	7 3	r w

۰.																															
11:50:			SP	1.5		50	7 .	3			SP	15																			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			ī	74.8	72.5	82.6		•			ĭ	14.8	73.5		76.5																
		-	SPEED	271	267	284	243	573		111	SPEED	271	269	270	278					2							7	٠,	m ,	7	
0		WAVE FIT	3	-23	- 20	9 0				WAVE	3	-23	-22	07-	-20				I	7.	=	13.	8 . 6			ī	7.	•		10.5	
5		SINE	>	69-	-77	-37				SINE	>	-69	-73	70-	-62			F11	SPEED	13	•		=		1	SPEED	13	=:	2 3		
AIRFORCE			>	-259	-251	-274	987-	957-			>	-259	-255	107-	-265			Y A V E	3	3	0	12	. 0 0		MAVE	x	3	~ 0	, a	c cc	
0115		-	30	٩	- 3	8 7	•			-	30	3	6 0 :	= :	00		SNO	SINE	>	58	45	99	36	SZ	SINE	>	58	35	E 1	0 3	
91,	SN		20	7	12	50		=	s		20	#	6 0 9	7 :	==		DEVIATIONS	_	>	22	30	<u>.</u>	23	VIAT10	_	>	22	26	57	54	
9/19/16	ONE HINUTE MEANS	1ENTS	ī	72.7	9.89	78.6	1.67	0.00	CUMULATIVE MEANS	SENTE	1	72.7	70.5	0.57	73.9		STANDARD D	.5	ī	7.1	10.	13.9	00	CUMULATIVE STANDARD DEVIATIONS	2	ī	7.1	0.0	0 0	0.5	
0 * >	NE HING	COEFFICIENTS	SPEED	5 4 2	216	233	277	74.7	MULATI	COEFFICIENTS	SPEED	245	229	730	243			COEFFICIENT	SPEED	13	1	32	7 9 7	E STAN	COEFFICIENT	SPEED	13	8 6	22	29	
5 TH 2	0	FOURIER	*	22	8	-	7	<u>.</u>	3	OURIER	*	77	20	0.7	1.0		E MINUTE		3	3	=	5 -	12	ULATIV		T	3	0 :	= =	==	
z.		0	>	-70	-16	4	0 1	87-		0	>	-70	-73	- 65	7 9 9		ONE	FOURIER	>	52	33	51	28	100	FOURIER	>	25	29	98	37	
1146			>	-232	-197	-222	-268	-774			5	-232	-213	917-	-230				>	2.1	7	33	34			>	21	27	28	3 4	
07152		-	ī	76.5	84.1	76.7	78.3	73.3		Ī	H	76.5	90.08	10.4	78.0			-	ī	6.6	4.3	6.3	13.9		-	ī	6.6		4.6	8	
Q .			SPEED	273	279	583	262	282			SPEED	273	276	280	284				SPEED	-	S	60 -	• ທ			SPEED	10				
		PEAKS		54	15	45	4.5	90		PEAKS		S	S	2	5.0			PEAKS	*	5		.	0 ~		PEAKS	*	5	œ :	= :	0	
			>	19-	-27	- 65	-58	11-			>	19-	-43	-20	-52				>	43	2.1	30	5.8			>	43	36	35	36	
•			2	-262	-276	-279	-284	-263			כ	-262	- 569	-273	-275				0	21	•	2.1	33			ס	21			21	
нЕ 1 6н Т			z		2	3	,	s			z x	-	2		в -	31			z I	-	2	~ :	run			z E	-	2	6	a ru	

	° °																																		
	12: 0:			36	58	23	20		24				9		26	54	22	23																	
	START TIME END TIME			1	0.19	88.8	56.0	5.8.3	91.5				ī	0.19	73.9	68.2	9.59	68.5																	
•	ENE	11.	4	STEED	177	171	167	081	167			-	SPEED	177	174	172	174	173																	
06 OH		WAVE FIT	1	*	-13	-13	-	0				WAVE FIT	1	-13	-13	-	-15				I	1.61	37.1	7.7	1001	4.				I	1 9 . 1	31.1	27.0	23.9	27.9
CE		SINE	>		- 14	- 1	- 91	-92	-24			SINE	>	-79	- 46	09-	69-	09-		111	SPEED	13	2	17	Ŧ .	=		-11	4	SPEED	13	=	13	12	12
AIRFORCE			-		-141	-142	-136	-150	-130				n	-147	-145	-145	7 7 7 1	241-		MAVE	3	•	80	2	9	•		WAVE FIT		3	0	æ	7	1	œ
0115		_	5	1					0.2			-	30	15	9	16	*	51	SNO	SINE	>	45	6	50	25	101	51	SINE		>	5 +	11	6.8	04	7.1
176	S		20		-	71	13	12	30				20	13	17	15	5 .	œ —	DEVIATIONS	-	0	37	43	20	50	75	IATION			0	37	38	33	30	30
9/16/76	ONE HINUTE MEANS	CIENTS	1		200	88.1	52.8	57.5	81.6		CUMULATIVE MEANS	TENTS	ī	58.3	72.0	0.99	63.6	0./0	ANDARD DE	S	I	13.5	38.5	7.3	- :	. 7	STANDARD DEVIATIONS	2 1		ĭ	13.5	30.8	27.1	23.7	28.8
. V A D	NE MIN	COEFF ICIENTS	Spero	77.	+	0 7 1	1+3	159	136		MULATIV	COEFFICIENT	SPEED	7 7 7	142	145	147	4.	5.	COEFFICIENT	SPEED	5 1	21	5 '	•	2	STA.,0	ICIE		SPEED	51	9	9	9 -	9
17 11	0	OURIER	3		- '	15	5	50	0.		2	OURIER		<u>*</u>	1 3	-	5 :	-	MINUTE	CHEFI		^	o .	c ,		•	CUMULATIVE	COLFFICIE			7	1	٠.	. 0	r
E IN GMT		101	>	. 1.	711	8	185	181	-24			FOU	>	-12	141	-23	165		0 11 6	OURIER	>	5.3	6.0		- 0		CUMUI	OURIER		>	2.3	54	0 :	7 .	
TIME			0	-120		111-	-115	-132	501-				Þ	-150	611-	/	121-			u	>	58	÷ .	0 0	100					ם	2.4	35	30	0 7 0	
01152		-	1				14.7	19.7	999			-	ī	91.3	77.7	16.8	75.0			-	I	O • 8 +	16.3	25.4				-		11	18.0	38.7	36.9	30.0	2356
V 4 D			SPEED	418		1/3	181	100	170				2	218	161	761	1 4 3				ברה	6.5	X :	0 1	- a					0.7	59.				
		PEARS		15		,	-	* *	7.5			FEAKS	3	15	200	0.				PEAKS	, SPEL		20	7.				FEAFS		3115 ×	7.0	r :	t 3	2 4	
			>	2.1	12.	0/1	16.	- 43	09-				>	1.2	17-	100				4	, .	5/1	7 0	1 16	*			-		,	174	130	120	011	
,			n	7				2	5				n	7+1-	,	2 7 7 7	1 7				o F	0	0 7 5	3.11	2 .					0 .	97	0 3	500	46,	
1	1 2 1 2 1		z E	-			7 :		r				7 I u	-				-32	2		 	- '	, -		2					2 .	- 0		2	e e	

0 : 0																																					
12: 0		SP	51	, ,	07	1 6	1	15				9		2	37	3	27	52																			
START TIME 11:55 END TIME 12: 0:		I	57.1	0		7 7	75.2	73.4				Ξ		1./5	68.8	70.5	71.7	72.0																			
ENG	11.	SPEED	568	33,	017	263	260	252			11.	SPFFD		447	287	279	275	270									•										
	WAVE FIT	I	0				6	• 15			WAVE FIT	3			-15	-13	1 -	-				Ŧ	16.6	27.	7 . 8	2.1	9.6				I	3.4.		2007	0 0		. 41
	SINE	>	-159	- 30		0/-	59-	69-			SINE	>		\c	101	-87	-82	6/-			F11	SPEED	47	0+	7	2	1			F11	SPEED	47	. 44.2	3 8	, ,	* .	
		>	-239		7.7.	-251	-250	-237				=		- 434	-240	-244	-245	- 544			MAVE	3	13	٥	7	2	Œ			WAVE	1	-			2 0	•	,
	-	30	_			7					-	2		7	6	17	+	12		45	SINE	>	20	0 + 1	33	13	38		S	SINE	>	7 0		101		*	
S		50	26		0	91	1	5				2.0		97	22	20	17	15		VIATIO		>	53	20	1 9	5	20		TATION	_)	,	, ,	3.7	3 0	87	1 1
ONE MINUTE MEAN	1ENTS	I	52.4			9.10	73.6	1001		E MEANS	IENTS	H		1.75	9.29	64.3	9.99	7.19		STANDARD DEVIATIONS	2	I	15.2	24.4	9.0	4.7	9.5		STANDARD DEVIATIONS	2	ī	16.3	2	1 . 4 .	0 :	0./1	
4E M1110	COEFFICIENTS	SPEED	206		777	504	229	526		CUMULATIVE MEAN	COEFF ICIENTS	05365		907	214	211	512	217			COFFFICIENT	SPEED	90	20	9-	•	1			FFICIENT	SPEED			0 3	2 ,	36	
0	FOURTER	r	01		0	9	<u>-</u>	11		00	OURIER			0	-	+ -	1.5	- 2		MINUTE	COFF	3		1.2	τ	Ŧ	0		CUMULATIVE	COEF	3	α	-		0	•	
	FOU	>	-124		70.	+/-	-63	-15			F00.	>		+71-	186	-82	-77	-11		946	OURIER	>	63	101	27	6	34		CUMUI	OURIER	>	4.1		2 7	0 .	2	, ,
		0	-154		741-	1 86	-218	-203				=			-175	-178	-188	761-			u.	>	36	7	23	1	17				ח	3.4	6 7	3.7	, ,	36	***
	-	I	97.3		1.4.1	13.8	73.1	18.6			-	1		5.1	в7.9	43.5	0.18	80.5			-	I	36.1	24.6	19.2	6.5	5.5			-	ī	14.	7 00	27.7	0 00	8	2 / 6
		SPEEU	324		* / 7	780	458	157				0 3 1 9 5	,	324	162	167	683	211				- 4	0		33	10	r				PEED			0 3	0 7 6	74	12.77
	PEAKS	z	3.8		20	30	74	3.2			PEAKS			73	36	35	37	34			EAKS	₩ SPE		61	23	œ	13			EAKS	3	2.0		22	100	77	2111
+3.	1	>	17	. "	2	-11	-11	3 7			a .	>		+	7	57-	-37	- 30			2	,	691	511	101	040	3.6			2	>	6 8 1	7 0		40.	971	1 1 1
н		2	-247		11.7-	-252	-243	742-						197-	-750	-255	-257	-750				17	14	21	23	61	0				ח	7 14		7 7 7		11	1 4
110		7 E	-		,	٩	7	5				2		-	2	٦	J.		-3	3		1113	-	7	4	2	Jri.				211			,	3 3	7 .	6.3

	0																																
	11:35:			SP	8-	18	22	22	7				SP	1.8	8 -	6-	20																
	START TIME 11:30:			ī	0.69	81.5	83.8	75.1	•				Ŧ	0.69	14.8	11.6	76.9																
	STA		-	SPEED	6 + 1	153	152	60	<u>.</u>			-1	SPEED	1 49	151	152	151	:															
HD 90			WAVE FIT		-13	-17	-7	- '	7			WAVE FIT		-12	-15	-15					I	19.4	38.0	45.8	36.4				ī	19.4	28.8	36.2	35.2
F			SINE	>	15-	-20	-15	- 35	?			SINE	>	-51	-36	-30	-31			F11	SPEED	2	15	· .	1.			-	SPEED	5	= 0	- 0	. 0
AIHFORCE				n	-131	-122	-117	-109	-158				ם	-131	-127	-124	-120			WAVE F	3	^	Ŧ	æ .	o œ	. N. M. MITTER		4 A A B		7	4 2	r ac	, ,
0115			-	30	1.2	15	- 9	5 4	<u>-</u>			-	30	1.2	1.2	+	17		5	SINE	>	α σ	10	9 6	8 8			2 1 2	>	t 9	1 2 2	ά .	ά α
16		S		20	97	77	0+	38	÷				20	97	11	31	33		VIATIO		כ	=	53	35	5 6 7	20			כ	=	21	10	30
9/16/76		MINUTE MEANS	STN31	ī	68.2	11.5	80.0	74.8	•	A A PA		1ENTS	ī	68.2	72.5	74.8	76.7		STANDARD DEVIATIONS	5	H.	19.3	31.7	39.6	32.9	7 G 8 4 6 6 7 7 7 6 6 7 7 7 6 6 7 7 7 7 6 7		•	Ŧ	19.3	25.0	12.7	32.0
VAD		E 1414U	COEFFICIENTS	SPEED	121	132	115	501	•		0.14.14	COEFFICIENTS	PEED	171	122	110	116			COEFFICIENT	PEE	7	7	0 0	0 0			COLLICIENTS	11	T	<i>=</i> ~	. 0	. 0
5		ONE	FOURTER C		12	23	۰	9 .	<u>c</u>	į		FOURIER C					1.7		MINUTE	COEFF	3	æ	7	0.	1.5	10 M		100	S	œ		7	1.5
IN GMI			FOU	>	. 4.	-21	-22	-26	:			FOUR	>	-43	-36	-35	-30		ONE	FOURTER	>	33	09	6 3	2.0	3	0	131 x00 4	>	33	4 n	2 0	5 2
TIME				ח	-105	+01-	16-	- 19	}				¬	-105	-105	-100	1 9 5			•	0	7	16	23	202				כ	1	= =	2.0	20
07152			-	ĭ	14.5	61.2	12.8	15.9	93.5			-	ī	74.5	4.84	8 6 9 9	4.17			-	Ŧ	17.7	7.4	20.02	23.4		•	:	ī	17.7	15.	17.6	18.6
VAD				PE	9+1	J	+	7	7.				d w	9+1	1 + 5	9+1	7 M				PEED	9	+		20				SPico	0 1	ທ ເ	0 0	c
			PEAKS	*	36	37	35	24	0			PEAKS	3	36	36	36	3.5			EAKS		1	c	5 0	10			2 4 4 5	# 5.P	,			: =
	. 87			>	- 36	9.	7	97-				4.	>	- 38	79-	651	7 9 7 1			а.	>	4.5	11		47				>	7 1	9 6	, ,	4.5
				ה	+134	-125	-133	-123					D	-134	-130	-131	-127				n	10	= :	9 9	33				0	2 :		1.2	
	HE 1641			2	-								11.4		7		+ 0				41.1	-	2	n :	1.0				1111	- 1	2 5	1 3	2

B-34

0:0				***																				
11:30:		2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			SP	0 7 6		3.8	38															
START TIME END TIME		1 H 1 H 1 H 1 H 1 H 1 H 1 H 1 H 1 H 1 H			ī	143.2	128.1	141.4	1 40 . 4															
	-	SPEED 188 205 200 177 194			w	188	0	193	193															
H0 90	WAVE FIT	11111	A A V E		3	0 -		-	0-			ī	59.2	53.8	60.0	70.3			Ī	59.2	57.7	57.5	56.3	58.5
щ.	SINE	4 92 21 83 165 60	SINE		>	92	2 4	87	9		F11	SPEED		7.1	77	32		F11	SPEED	12	22	12	21	6.3
AINFORCE		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			כ	19-	701-	-	69-		MAVE		2	10	0,	17		WAVE		15	1.2	-	01	7.1
5110	-	30 17 26 28 23 25	_		30	17	2 7 6	2 4	7.	SNO	SINE	>	132	134		129	Ş	SINE	>	132	132	124	9 :	111
7.6		20 48 36 29 43 35			20	4 4 6 6	7 0	36	38	DEVIATIONS		Þ	104	40	7	135	DEVIATIONS		0	104	103	112	112	115
9/16/76	IENTS	137.4 97.8 136.8 130.5	CUMULATIVE MEANS R COEFFICIENTS		Ξ	137.4	122.4	136.6	135.3	ANDARD DE	. 5.	I	53.5	29.4		71.9			ī	59.2	4.09	60.7	59.1	6.09
T VAD	CUEFFICIENT	SPEED 113 118 117 110	MULATIVE ME COEFFICIENT		SPEED	113	0 4	112	115	E 5.T	DEFFICIENT	SPEED		13	æ ~	7 -	STANDARD	FICIENT	SPEED	•	10	•	0	10
_	FOURIER	* > + 0 % -	OURIER O			0 ^	, ,	. –	-	HINUT	U	3	'n	œ		13	CUMULATIVE	COEF	*	S	1	•	•	r
N 64	100	60 2 44 105 31	0.07		>	900	34	- 15	\$	ONE	OURIER	>	# 60	0.6	c a	80	COMO	OURIER	>	÷ 60	6.8	# #	11	8.3
7 1 ME		137			כ	-37	0 0	-37	-37		•	0	4 8	œ	35	7.3			2	4.8	0 7	2.5	57	0.9
01152	-	87 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	-		I	87.5	0 7		•		-	ī	10.8	13.5	13.1	37.0		-	ĭ	0	in	÷ .	13.9	•
VAD		SPEED 241 240 240 231			SPEED	147	240	238	736				13	1	1 3	0.			PEEU	1.3	13	13	9 1	1.3
	PEAKS	5 N 2 N 3 X	PEAKS			4 0	6	23	5		PEAKS	SPE	3.0	2.5	5 -	1 =		PEAKS	8	3.0	5.6	23	25	5.2
		* 1 - 5 × × × × × × × × × × × × × × × × × ×			>			-22	7			>	45	15	10.3	109			,	4.5	09	5.8	5.4	0.0
, ,		-223 -223 -223 -191			0	-230	-231	-229	-221			D	*	28	20) -			9	5	22	7.1	53	,
HE16		z - 2 m + 5			Z E	- 6	7 1		-35			NI N	-	2	m 3	. 10			MIN	-	2	3	•	2

3:20: 0																																			
~		5	10	28	25	1	29	76				8	2.8	27	7.4	25	25																		
START TIME END TIME			-	40.0	54	139.6	7	153.4				1	140.0		145.7	144.5																			
0. 5.1	F17		31650	316	275	287	288	282			11.	SPEED	-	294	0	0	289																		
6	WAVE	3	. '		7	-25	- 12	-19			WAVE FIT	3	111	-	8	- 17	-17					I -	1 9 • 3	- 4.	9 1	1.0			Ĭ		19.3	17.6	15.6	13.8	13.1
u	SINE	>		234	240	219	223	248			SINE	>	234	237	232	230	233			F11		SPEED	23	17	37	20		F11	SPFED		73	56	0 0	87	17
AIRFORCE		:	0	061-	-116	-183	-180	-124				٥	-190	-150	651-	-165	-156			WAVE			9	-	.	2 0		MAVE			9	2.	2 :	5	7
0115	-		2	-	œ	6 1	17	٥			-	30	7	=	13	7	13		SN	SINE		> '	69	56	7 -	28	S	SINE	>	0		0 .	¢ -	- 0	3.4
2 2		20		1 8	8	-	20	15				20	-	8	6	6	8		DEVIATIONS			o 6	8	99	52	52	1 A T 1 0 N		0	a	0	0 6	0 :	50.	70
T VAD 9/18/76 ONE HINUTE MEANS	CIENTS	1		140.5	151.0	137.2	139.1	151.3		CUMULATIVE MEANS	STENTS	ī	140.2	3	143.6	142.5	144.2		STANDARD DE	1 5		Ξ.	1.9.5	***	90 c	12.4	STANDARD DEVIATIONS		ī	u a	9.	16.7		1.6.	7001
VAD H H IN	COEFFICIENT	Spero		187	240	545	947	244		MULATI	COEFFICIENTS	SPEEU	281	259	255	253	152			DEFFICIENT	,	SPEED	=	7 (30	35		FFICIENT	SPEED	,	= '	33	37		• •
U	OURIER	3		57	7	97	7	23		2	FOURTER		25	23	54	2 1	2.1		MINUTE	COEF			77	5.	2	12	CUMULATIVE	COEF			17	9	0 .	, ,	0 1
E 5	F00	>		907	202	174	1.84	203			100	>	208	204	161	+ 6 1	161		ONE	OURIER			9	5.0	5 7	27	CUMUI	OURIER	>	14	0 :			65	,
1 I M E		=	, :	1/1-	-117	-166	-160	-117				כ	-171	-142	661-	-152	5 + 1 -			•			99	63	3.7	2 5)	4.6	0 .	0 3		0 0	
01154	-	1	-	7	7	2	137.0	146.1			-	ī	143.2	1.9.1	146.1	3	4			-			1.5.		13.7			-	ī						
A >		Spero		373	278	585	282	590				141	CV	300	0	0	3				:	יי	35	50	2 2	20			(a)		7	9 6	11	500	7.0
	PLAKS			2	36	7.1	33	20			PEAKS		5.5	15	25	47	10 7			PEAKS			- :	72	10	0		PEAKS	, c	7		3.5	35	200	
28.		,		557	577	133	107	787				>	253	240	738	577	131						0	97	0 3	27				19		0 5		0 0	
# LH 9		-	3		7	15	-183	9				n	Œ	-162	4	9	4					0 4	0 .		2 - 2	· c			>	46		45	74	40	20.00
н£ 16)		Z E			7	٠	,	S				2 E	-	2	~		s 3 -	36			1	4	- 1	7	7	'n			2 2	-	- 17		, ,	ıſ	1

3:20: 0 3:25: 0			SP	20	50	17	28	22				SP	50	20	6 7	22	,																		
START TIME END TIME			I	136.6	138.9	146.7	142.9	152.2				ī	136.6	137.7	140.5		7.55.																		
•06			W SPEED								E F17	W SPEED									ī	5115	7.2	6.2	50.4					11	5.12	15.9	1.+1	9.51	15.2
ı ı	1		>								SINE WAVE	>								F11	PEED							F11		SPEED					
AIRFORCE			ם	-206	161-	-165	-173	-133				כ	-206	-200	-189	-185	-175			WAVE	3	20	•	1	17	>		MAVE		3	2		-	-	-
0118		-	30	20	10	13	16	=			-	30	20	15	15	1.5	-	0 N S	,	SINE	>	110	2.1	7	0.6	31	SNC	SINE		>	110	19	7.0	74	99
927	S Z		20	27	9	23	52	20	v	,		20	27	22	22	23	22	DEVIATIONS		_	5	38	32	23	19	7	DEVIATIONS	-		ס					
9/18/76	TE MEA	I EN I S	ĭ	136.6	138.9	143.5	41.9	150.2	VE MEAN		CIENTS	ī	136.6	137.7	139.5	140.5	145.0	STANDARD D		1.5	H	17.3	5.3	4.9	14.7	7.5	STANDARD DE	15		Ŧ	17.3	12.8	11.3	15.0	11.9
VAD	ONE MINUTE MEANS	COEFFICIENTS	SPEEU		247	248	756	238	NE ME ME AND A PERSON	- 410	COEFFICIENT	SPEED		263	265	263	258			COEFFICIENT	SPEED	7	15	28	35	20		COFFFICIENTS		SPEED					
	3	FOURIER	3	36	26	56	26	22	5		DURIER	3	36	31	31	59	28	HIMITE		x	3	1.8	5	9	12	13	CUMULATIVE			3	4 .	*	1.2	1.2	1.5
W 9 N 1		104	>	204	uf -	2.5	201	205			104	>	504	195	202	102	202	980		FOURTE	>	8.2	6	34	95	1.6	000	FOURTER		>	8.2	9	53	5.0	6 17
1 HE			5	-176	141	1 2 7	1 1					כ	-176	641-	-165	-160	-152				2	00	21	23	28	32				0	30	20	7.1	5 4	30
01154		-	I	1 30.0	9 7 5 1	0.151		144.			-	ī	0.01	138.9	141.2	143.8	143.9			-	I	13.4	13.9	10.9	15.5	1.8.1		-		H _	13.4	13.1	12.6	13.8	***
VAD			04145	1 -	100	11.0	515	301				SPEED	112	317	317	318	315				SPFED	-	15	32	31	52				SPEED		32			
		PEAKS				2	0 -	- S			PEAKS	*	74	· · ·	09	09	2.6			PEAKS	3	17	15	7	2 4	25		3	4	ĸ	37	34	35	3.2	3.2
· e			>		007	017	157	238				>	750	734	145	750	847				>		7 0 7	3.8	61	67				,	9	0.9	55	5.7	5.6
н			-	2000	007	0 :		7 4				-	200	507-	-193	100	-178				-	3	2.0	50	19	9.0				>	3	50	75	58	909
HE 16HT			1			,	n :	* 10				1		- ^		E	s - 3	7			2			-	7	5				H 12		2	3	1	'n

3:25: 0 3:30: 0			5.5	22	13	20	32	52				SP	22	. 6		22	22																			
START TIME END TIME 3				134.8	1 * * * 1	146.3	42.	144.0				I	9.44.1	139.1	141.6	141.8	142.2																			
		1.1	0	276	321	356	342	339			FIT	SPEED	27.6	207	8 1 8	323	326						~	a .	- 0	, ,					2	1	0	,	2	
чо 90.		WAVE FI	3	51-	-20	-22	-12	1 2 2	1		WAVE F	3		0 -		-17	0-					H	16.	.	1.4.									18.4		
		SINE	>	190	260	394	222	377	,		SINE	>		0 1	777	242	240	7		114		SPEED	52	28	97	27			114	SPEEU				39		
AIRFORCE			2	a	40	0 0	- 0	J (>					-187	-187	061-	100	7		N V E		•	0	2	œ ·	17	:		KAVE	,	0	· ac	00	1.2	1.2	
0115 A1		-	90	4	0 3						-		30	9	-		. :	2	SNC	SINE		>	67	3.2	30	1.5	-	5 2	SIME	2		2 4		200	5.6	
			00		0	x 0	00	2.1	9				20	16	13	5 !	- !		VIATIO			2	0,	7	2.1	181	17	DEVIATIONS	_		0 :	7 0	24	9 2	16	
4/18/76	MINUTE HEAMS	ENTS	:		134.5	45.4	45.5	39.5	œ • · · · · · · · · · · · · · · · · · ·	CUNULATIVE MEANS	ENTS		I	134.5	138.1	139.0	134.5	140.0	STANDARD DEVIATIONS		0	H	13.1	4.2	9.0	35.4	v	STA DARD DE			Ξ.	13.1	0.11	17.7	15.8	
0 4 7	10,1k	COEFFICIENTS		2						ULATIVE	COFFFICIENTS		SPEEU			287			TE STAM		1011	03345	2	27	16	55	30		COEFFICIENTS		SPFEU	31	0.5	a :		
15	ONE	3		3	2.1	52	33	51	35	CUN	2	,		2.1	73	24	54	56	MINUTE		00			. '	13	27	α	UMULATIVE	R COEF		*	-	0 0	17		
IN 6MI		FOUNT		>	191	236	253	147	234		2		>	169	200	513	207	213	340		FOURTER	3			2.8	5.4	3.2	COM	FOURTE		>	(15)	1.5	5.2	20	0
1146				n	-166	-180	-195	4 4 4	-189				0	144	-172	-180	-182	-183					2			142	100				ס			2.3		
15110				ı	8 . 1 .	7.8	20.01		1.89			-	1			142.9	141.3	142.7					Ξ.	10.	2.4	5 5	8.6				ı.	10.7	0.0	5.	10.2	10.2
V A D				PEED	5				3.40				3 3 0		097	30.2	177	330					ial.	-	77	- 00	7.7				PELU		2.4	9.5	3 8	36
			AKS	5			25	0 1	2 5			PEARS						9			PEAKS		200	1 9	,	2 2	17			11.81.5	5	1	. 1	24	317	117
			1	>		000	111	1.97	747			1		,	077	5 5 7	107	458					•	37	47	, .	50				,		0.60	35	,	,
	,			11	, ,		59-	-534	-234					>	1	1	-	-207					7	0 7	77	7 .					1.0	9.0	10	5.1	5.5	2.2
	116 1 54								 					2 1 5	-	~		э эл В -					2 H	-	,	wy 1	* 4						- 1	, "	,	il

B-39

3:30: 0					97	0.7	0 :	, 9				•	26	23	27	54														
START TIME								143.9					133.1	130.2	131.9	134.5														
		=	SPEED	200	34.2	327		279		F 1.1		SPEED	, ,	321	316	310														
0 6 OH		WAVE FIT	,			-22		-15		WAVE	1		7 -	9	-15				ī	15.2	5.6	3.4	31.3			1		7.01	6.0	21.4
RCE		SINE						223		SINE	>	. 6	224	240	206	710			SPEED	31	30	23	t		111	SPEED	-	38	33	35 36
OTIS AIRFORCE			ס	-209	-220	-189	-254	-163							-217			> 4	3	2	-	=	- °		MAVE	*		0	=	2 -
0115			30					2		-					56		SHO	PATR	>	62	28	27	- 6	S	SINE	>	42	5.7	15	107
9/18/76	SNI			22					S		20	22	8	20	25	23	DEVIATIONS		>	59	35	J :	30	DEVIATIONS		0	65	4	36	7 7 0 0
1/6	ONE MINUTE MEANS	CIENTS	ĭ	131.5	139.5	143.3	110.2	142.2	E MEANS	IENTS	ī	31.5	135.5	138.4	131.6	133.9	STANDARD D		Ŧ	16.3	1.9		5.9	ARD DE		Ξ	16.3	12.4	10.7	17.4
, 0 A >	NE MIN	COEFFICIENTS	SPEED	240	290	517	234	242	CUMULATIVE	COEFFICIENTS	SPEFD		260	597	258	754		COEFFICIENTS	PE	3.1	20	53	18	STANDARD	COEFFICIENTS	PEED	3.1	7	3.6	t t
10 1119	0	FOURTER		91	80	34	-	26	ino	FOURIER			1.2	5.0	9 -	œ	BINUTE		3	10	56	n u	1	CUMULATIVE	COEFF	5	10	0	20	1.6
<u>z</u>		0.4	>	153	212	750	6.8	9		FOL	>	153	183	196	171	5/1	0146	OURIER	>	2.7	4.	7 -	~	CUMO	OURIER	>	5.7	2.5	53	7.3
1 1 3 1 1			כ	-173	-114	-162	-194	-147			D	-173	-176	-171	-177				2	5 1	77	22	28		•	D	6 7	40	33	343
01154		-	r r	135.8	140.5	6.741	142.7	5.44.		-	ī	3	3	7	142.0	7		-	H.	2 (7.5		12.8		-	I	14.3	11.7	9.01	.0.7
Q 4 >			SPEEU	567	348	376	2 - 4	697			2	567	322	323	322	0.0			EED	5 7	2.5	47	1.6			1.0	6.7	47		7 7
		PEAKS	2	56	57	5.	15	27		PEAKS	T	26	52	30	- T	2		PEAKS	3	2.0	12	15	9		E A K S	* SPEL	1 6	7 7 7	23	77
. 8.			>	507	447	5/2	653	-			,	502	236	750	157			a.		0 4	12	6.5	35		3	>	0.9	200	3 15	5.5
			>	-200	112-	5/1-	0	15.			n	-200	-204	961-	7 7				5	- 4	3.7	2.1	15			ס	- 9	25	. ,	· · ·
HE16H1			z E		,	7 3		n			z E	-	2	7 3	В	-40	0		z -		. ~	,	2.			<u>=</u>	-	7	7	5

	3:30: 0																																		
				SP	23	27	22	25	22				9	23	25	54	24	24																	
	START TIHE END TIME			ī	144.6	139.7	146.1	146.7	143.3				1	9.44	42	143.5	144.4	144.2																	
	EN EN		-	SPEED	309	333	323	341	315			_	SPEFD		320	321	327	324																	
HD 90			WAVE FIT	3		0.	-23	-20	œ -			WAVE FIT	3	0		-	-16	-				I.	4.6	12.8	•	5.7				H				6.6	
30			SINE	>	157	157	197	279	250			SINE	>	251	751	256	242	260		F11		SPEED	71	27		5 6 7			F17	SPEED	2.1	26	22	2.7	2.7
AINFORC				n	-178	-208	-180	-180	-187				>	-178	-192	-188	-186	-186		WAVE			=	= '	× •	• •			WAVE					=	
0115			-	30	œ	20	0.	0.	6			-	30		+	13	1.2	=	SZ	SINE		>	16	7 (21		0	SINE	>	9	4	36	7	0 +
16		2		70	13	23	7	*	16				20	13	17	1.1	16	9 1	DEVIATIONS			>	28	45	57	37				>	28	37	33	4 3	7
9/18/7		MINUTE MEANS	COEFFICIENTS	Ŧ	141.6	139.5	146.2	1 44.7	142.3		CUMULATIVE MEANS	FOURIER COEFFICIENTS	ĭ	141.6	140.6	142.4	143.0	142.9	STANDARD DE	1 5		I	0.	12.6	7.0	7.0	0.00	1000	1 5.	I	0.7	8.7		8.8	T
VAU		ONE MI	0EFF 1	SPEED	276	277	513	303	211		TOLATI	OEFF!	SPEED	276	277	278	784	283	E 514	COEFFICIENTS		L L	23	53	200	25			COEFFICIENT	3	23	25	5 2	30	5.7
10 1		5	FOURTER		1.6	23	52	56	2.5		100	KIER		9 -	61	7.1	22	2.2	MINUTE				_ :	5.		1	TA III			3	-	13	13	1.2	=
IN GMI			F00	>	512	503	730	544	717			F 0 U	>	215	212	518	225	224	ONE	OURIER	-	>	20 .	25	- 5	- 2	1		DURIER	>	1.5	35	3.1	3.9	3.5
TIME				כ	-171	+11-	-155	-170	691-				ם	-171	-172	-167	-168	-168		•	-	0	97		4 7 7	3.5			•	۵	2.6	31	3.2	35	35
01154			-	I	145.0	7.44.	***	142.5	34.3			-	ī	145.0	7	9.441	7	142.3		1.	•		10.7		15.2	10.2			-	HL	10.7	8.3	7.8	0.01	10.5
VAD				SPEED	355	347	331	848	323				SPEED	325	335	336	333	336			CDCCI	. 1	÷ .	17	35	2.1				PEED	34	30	53	9.0	5.2
			PEAKS		33	5.4	÷.4	24	-			PEARS		33	53	7	4.6	T.		EAKS			7 .	2 5	26	33			EAKS	¥ S.	21	9	5.3	5.7	53
	43.			>	1.97	187	717	271	. 77				>	1,97	115	717	717	263		٩	3		0 0	3.1	11	3.1			3	>	2.4	4.5	04	15	15
	,,			n	DH1.	-200	+61-	-201	977.				n	DR -	-185	-161	567-	-200			**		7 0		. 55	25				n	40	3.4	35	2 7	n *
	нетент			u I u	-	7	3	y	n							3					1111				7	2				nIn	-	2	3	,	'n
																	В	-41																	

0HE HIJUTE HEANS 1 SINE WAVE FIT V M SPEED TH 20 JO V M SPEED TH SP 165 16 232 149.2 15 14 -156 217 -11 272 149.7 19 165 21 253 137.6 20 16 -18 211 -27 214 -10 21 167 24 246 137.6 20 16 -18 211 -25 281 140.1 19 163 27 246 137.6 16 17 -226 224 -25 283 133.9 14 169 30 278 133.9 18 17 -226 224 -24 322 135.1 23 169 25 133.9 18 17 -226 224 -25 135.1 23 135.7 14 -56 135.1 23 135.1 23 135.1 14 -15 -26 224 -25 283 13	FUUNIER COEFFICIENTS SINE WAVE FIT	FUUNIER CUEFFICIENTS 1 SINE WAVE FIT 1 V W SPEED TH 2D 3D U V W SPEED TH 165 16 232 143.2 15 14 -158 217 -11 272 143.7 19 167 21 253 138.2 12 7 -179 214 -16 281 140.1 19 167 2 24 246 137.6 20 16 -182 21 -25 283 133.9 14 163 30 278 133.9 18 17 -206 224 -24 322 135.1 23 189 30 278 133.9 18 17 -206 224 -24 322 135.1 23 189 30 278 133.9 18 17 -206 224 -24 322 135.1 23 180 4 W SPEED TH 2D 3D U V W SPEED TH 180 21 244 139.6 16 13 -16 215 -13 276 141.9 19 180 21 244 139.6 16 13 -16 20 -19 20 138.5 19 180 2 2 244 139.6 16 13 -19 20 209 138.5 19 180 2 2 244 139.6 16 13 -19 20 209 138.5 180 2 2 244 139.6 16 13 -19 20 209 138.5 180 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	FUNNIER COEFFICIENTS V W SPEED TH 20 30 U V W SPEED TH 165 16 232 143.2 15 14 -168 217 -11 272 143.7 19 164 21 232 143.2 15 14 -168 217 -11 272 143.7 19 165 16 232 143.2 15 14 -168 211 -21 263 133.9 168 30 276 133.9 18 17 7 -20 224 -24 322 135.1 23 169 30 276 133.9 18 17 7 -20 224 -24 322 135.1 23 169 21 24 149.2 14 17 -20 30 U V M SPEED TH 169 21 24 139.9 19 17 -11 272 143.7 19 160 21 24 139.9 19 19 19 19 19 19 19 19 19 19 161 24 24 139.9 19 19 19 19 19 19 19 19 162 21 24 139.9 19 19 19 19 19 19 19 19 163 21 24 139.9 19 19 19 19 19 19 19 19 164 22 24 139.9 19 19 19 19 19 19 19 19 165 21 24 139.9 19 19 19 19 19 19 19 19 167 22 24 139.9 19 19 19 19 19 19 19 19 168 21 24 139.9 19 19 19 19 19 19 19 19 169 21 24 139.9 19 19 19 19 19 19 19 169 21 24 139.9 19 19 19 19 19 19 160 21 2 20 29 130.9 19 160 21 2 29 29 19 29 19 29 19 170 24 252 136.9 19 19 19 19 180 29 29 17 9 19 18 20 180 29 29 19 29 19 19 180 29 29 19 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 29 19 180 29 29 19 180 29 29 19 180 29 29 19 20 20 130.9 19 20 20 20 130.9 19 20 20 20 20 130.9 19 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 2	FUNKIER CUEFFICIENTS 1			VAD	01154	1146	IN GH	5	0 4 >	9/18/76		0 1 1 S A	AIRFORCE	w	HD 90		START TIME	3:35: 0
FUUNIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH 2D 3D U V W SPEED TH 165 21 253 138-2 15 14 -158 217 -11 272 143.7 167 24 246 137-6 20 16 -182 211 -23 287 140.1 174 24 246 131-3 17 17 -20 3 195 -25 283 133.9 185 29 248 131-3 17 17 -20 224 -24 322 135.1 CUMULATIVE HEANS V W SPEED TH 2D 3D U V W SPEED TH 185 16 232 143-2 15 14 -158 217 -11 272 143.7 186 19 243 140-7 14 11 -168 215 -13 276 141.9 187 23 245 137-6 16 14 -180 209 -19 280 138-5 177 23 245 137-6 16 14 -190 209 -19 280 138-5 180 24 25 137-6 16 14 -190 202 -19 280 138-5 FUUNIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH V W SPEED TH V W SPEED TH S 14 -15 20 29 -19 280 141.2 180 24 31 40-7 14 -190 202 -19 280 138-5 FUUNIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH S 23 245 137-6 16 14 -190 202 -19 280 138-5 180 24 13 24 139-6 15 14 -190 202 -20 290 138-5 5 14 27 64 1 57 0 4 52 2 15 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	FUNKIER CUEFFICIENTS V W SPEED TH 165 16 232 143.2 15 14 -158 217 -11 272 143.7 167 21 253 138.2 12 7 -179 211 -25 283 130.9 168 21 254 133.9 12 7 -179 211 -25 283 130.9 169 30 278 133.9 18 17 -226 224 -24 322 135.1 190 278 133.9 18 17 -226 224 -24 322 135.1 191 24 24 246 137.6 16 17 -158 215 -11 272 143.7 192 18 10 24 130.2 15 14 -158 215 -11 272 143.7 193 190 24 130.6 16 13 -173 214 -17 280 141.2 194 19 243 190.7 14 11 -168 215 -12 280 130.9 195 21 244 137.6 16 14 -160 209 -19 280 130.9 196 21 244 137.6 16 14 -190 212 -20 290 130.5 197 4 252 136.8 17 14 -190 212 -20 290 130.5 198 21 244 130.0 10 V W SPEED TH V W SPEED TH V W SPEED TH UNE HIHUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS 24 252 36.8 20 8 20 7.1 253 18 21 50 7.4 52 32 17 41 8.9	FUNHER CUEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 5 165 16 232 143.2 15 14 -158 217 -11 272 143.7 167 21 253 138.2 12 7 -179 211 -23 287 140.0 168 21 246 137.6 20 16 -203 195. 169 30 278 133.9 18 17 -226 224 -24 322 135.1 174 24 246 137.6 12 17 -226 224 -24 322 135.1 189 30 278 133.9 18 17 -226 224 -24 322 135.1 180 10 27 143.7 17 -226 224 -27 32 143.7 180 21 243 143.2 15 14 -158 215 -13 276 141.9 180 21 243 140.7 16 11 -168 215 -13 276 141.9 180 21 244 139.6 16 14 -160 209 -19 280 141.9 180 243 140.7 16 13 -190 209 -19 280 141.9 180 244 139.6 16 14 -180 209 -19 280 141.9 180 24 137.6 16 14 -190 209 -19 280 141.9 180 24 137.6 16 14 -190 209 -19 280 138.5 180 24 137.6 16 14 -190 209 -19 280 138.5 180 24 137.6 16 14 -190 209 -19 280 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 24 25 136.8 17 14 -190 20 25 19 31 15.0 7 15 15 1 26 19 31 15.0 7 1 27 2 20 20 138.5 28 20 20 20 20 20 20 20 20 20 20 20 20 20	FUNHIER CUEFFICIENTS 1	FUUNTIER CUEFFICIENTS 1							0	E MINU	JTE MEAN	s					2		
V W SPEED TH 2D 3D U V W SPEED TH 55 143.7 165 212 143.7 165 213.7 16 281 140.1 174 22 213.3 195.2 135.1 194.2 11 272 143.7 174 29 246 131.4 17 17 -203 195 -25 283 133.9 189 30 278 131.9 18 17 -226 224 -29 322 135.1 189 30 278 133.9 18 17 -226 224 -29 322 135.1 189 20 278 141.2 180 20 278 141.2 185.1 185.	V W SPEED TH 2D 3D U V W SPEED TH 5D 19.7 11 272 149.7 11 272 149.7 11 272 149.7 11 272 149.7 11 272 149.7 11 272 149.7 11 29.2 12.2 25.3 138.9 18.1 17 -226 224 -24 322 135.9 18.9 18.7 -226 224 -24 322 135.9 18.9 18.7 -226 224 -24 322 135.9 18.9 18.7 -226 224 -24 322 135.9 18.9 18.7 -226 224 -24 322 135.9 18.9 18.7 -226 224 -24 322 135.9 18.9 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5	V W SPEED TH 2D 3D V W SPEED TH 2D 10 V W SPEED TH 2D 105 10 V W SPEED TH 2D 3D V W W SPEED TH 2D 127 112 77 113 77 115 12 25 113 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	165 16 232 143.2 15 14 156 217 17 281 140.1 167 12 253 133.2 15 14 156 217 11 275 143.7 167 24 253 133.2 12 7 17 203 195 12 163 29 246 133.3 17 17 203 195 224 225 283 133.9 163 29 246 133.3 17 17 203 195 224 140.0 164 29 248 133.9 18 17 220 224 224 221 232 133.9 165 16 243 140.7 14 11 166 217 11 272 143.7 167 18 243 140.7 14 11 166 217 11 272 143.7 167 19 243 140.7 14 11 166 219 219 240 139.9 167 19 243 140.7 14 11 120 209 139.9 168 19 243 140.7 14 11 166 219 219 240 139.9 169 19 243 140.7 14 11 160 212 200 230.0 160 19 243 140.7 14 11 160 212 200 230.0 160 19 243 140.7 14 110 200 212 200 230.0 161 19 243 140.7 14 140 210 200 210 200 162 19 243 140.7 14 140 200 212 200 230.0 163 19 243 140.7 14 150 212 200 230.0 164 19 245 130.0 100 100 212 200 200 165 19 243 140.7 14 200 200 200 166 19 243 140.7 200 200 200 200 167 19 240 240 240 240 240 240 240 168 19 240 240 240 240 240 240 240 169 243 240 240 240 240 240 240 240 160 240 240 240 240 240 240 240 240 160 240 240 240 240 240 240 240 240 160 240 240 240 240 240 240 240 240 240 160 240 240 240 240 240 240 240 240 240 160 240	165 16 232 143.2 15 14 156 217 11 27 143.7 15 14 156 217 11 27 143.7 15 15 14 16 21 21 21 21 21 21 21	PEAKS	-	-			FOURI	œ	DEFFIC	LENTS		-		SINE	MAVE	<u>-</u>		
165 16 232 143.2 15 14 -158 217 -11 272 143.7 167 167 17	165	165	165 16 232 143.2 15 14 -158 217 -11 272 143.7 167 21 253 138.2 12 7 -17 211 -23 281 140.1 174 24 248 131.3 17 17 -203 195 -25 283 133.9 184 24 248 213.3 18 17 -220 224 -24 322 135.1 185 18 232 143.2 18 17 -220 224 -24 322 135.1 185 18 232 143.2 18 17 -220 224 -24 322 135.1 185 18 232 143.2 18 14 -158 217 -11 272 141.9 185 18 232 143.2 15 14 -158 215 -13 276 141.9 185 18 232 143.2 14 11 -168 215 -13 276 141.9 185 18 232 130.8 19 14 -150 212 -20 290 130.5 185 19 244 139.0 16 13 -13 214 -17 280 141.2 180 24 25 30.8 17 14 -190 212 -20 290 130.5 180 24 25 30.8 17 14 -190 212 -20 290 130.5 180 24 27 24 30 28 5 11 8.5 25 14 27 6.1 29 17 9 16 6.0 26 14 27 6.1 29 17 9 16 6.0 27 19 25 30 30 28 21 41 8.5 28 11 24 27 6.1 29 17 41 8.4 29 20 20 20 20 20 20 20	165 16 232 143.2 15 14 158 217 -11 272 143.7 167 21 253 138.2 12 7 -17 211 -23 281 140.1 174 24 24 253 138.2 12 7 -17 211 -23 281 140.1 174 24 248 131.3 17 17 -226 224 -24 322 133.9 163 29 248 131.3 17 17 -226 224 -24 322 133.9 184 24 248 131.3 18 17 -226 224 -24 322 133.9 185 14 232 143.2 18 17 -226 224 -24 322 133.9 185 14 232 143.2 15 14 -15 21 -11 272 143.7 185 14 232 143.2 15 14 17 -16 215 -13 276 141.2 185 14 232 143.4 139.6 16 13 -16 215 -13 276 141.2 187 24 139.6 16 14 17 -160 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 190 24 252 136.8 17 14 -190 212 -20 290 138.5 190 24 252 136.8 17 14 -190 212 -20 290 138.5 190 24 252 236.8 17 -190 212 -20 290 138.5 25 19 21 5.9 5.9 5.9 5.9 5.9 25 19 27 7.4 52 32 17 41 8.4 26 19 27 7.4 52 32 17 41 8.4 27 19 25 29.9 29 29 29 29 28 29 29 29 29 29 29 29 20 20 23 11 29 29 20 20 20 23 11 29 29 20 20 20 20 20 20 20 20						>		0 5 3 6	Ŧ	20	30	>	>	3	SPEED	ī	SP
16.7 21 253 138.2 12 7 -179 214 -16 281 140.1 174 24 246 137.6 20 16 -182 211 -23 287 140.0 163 29 248 131.3 17 17 -220 224 -24 322 135.1 163 29 248 131.3 17 17 -220 224 -24 322 135.1 184 29 248 131.3 18 17 -220 224 -24 322 135.1 185 16 232 143.2 15 14 -158 217 -11 272 143.7 185 16 243 140.7 14 11 -168 215 -13 276 141.2 186 19 243 140.7 14 11 -168 215 -13 276 141.2 187 23 244 139.6 16 13 -173 214 -17 21 270 141.2 180 244 139.6 16 14 -180 209 -19 281 139.4 180 244 139.6 16 14 -19 212 -20 290 138.5 180 24 252 136.8 17 14 -19 212 -20 290 138.5 180 24 25 236.8 17 14 -19 212 -20 290 138.5 180 24 25 236.8 17 14 -19 212 -20 290 138.5 180 24 25 236.8 17 14 -19 212 -20 290 138.5 180 24 25 236.8 20 20 20 20 20 25 26 27 27 27 27 27 27 27	10	167 21 25.3 138.2 12 7 -179 214 -16 281 140.1 174 24 246 137.6 20 16 -182 211 -23 287 140.0 184 39 248 133.9 18 17 -226 224 -24 322 135.1 185 19 248 133.9 18 17 -226 224 -24 322 135.1 186 19 278 133.9 18 17 -226 224 -24 322 135.1 185 16 232 143.2 15 14 -158 217 -11 272 143.7 186 19 243 140.7 14 11 -168 215 -13 276 141.9 186 19 243 140.7 14 11 -168 215 -13 276 141.9 187 23 249 137.6 16 14 -180 209 -19 280 141.9 177 23 245 137.6 16 14 -190 212 -20 290 138.5 190 24 245 137.6 16 14 -190 212 -20 290 138.5 190 24 252 136.8 17 14 -190 212 -20 290 138.5 190 24 25 23.0 24 5 21 6.0 24 25 23.0 24 5 23 24 6.0 25 24 27 6.1 29 27 6.0 25 25 25 25 25 25 25	CUMULATIVE HEANS CUMULATIVE HEANS FOURIER COEFFICIENTS UNE HINUTE STANDARD DEVIATIONS FOURIER COEFFICIENTS 1	FOURIER COEFFICIENTS 12	איננט ייי			,	3.			232	143.2	15	7	-158	217	=	272	143.7	6
TOURLER COEFFICIENTS FOURIER COEFFICIENTS THOUSE RIGHTS CUMULATIVE HEANS TOUR HINUTE STANDARD DEVIATIONS TOUR HINUTE STANDARD DEVIATION DEVIATION TO TO	FOURIER COEFFICIENTS V	TOURTER COEFFICIENTS FOUNTER COEFFICIENTS	CUMULATIVE HEANS FOURIER COEFFICIENTS ONE HINUTE STANDARD DEVIATIONS FOURIER COEFFICIENTS I 5 10 24 32 195.1 SINE MAVE FIT SINE MAVE FIT SOUR HINUTE STANDARD DEVIATIONS FOURIER COEFFICIENTS I 5 10 24 52 136.8 I 7 -20 2 195.2 SINE MAVE FIT V M SPEED TH U V W SPEED TH V M SPEED TH SINE MAVE FIT TH SINE MAVE FIT SINE MAVE FIT N M SPEED TH V M SPEED	CUMULATIVE MEANS FOURIER COEFFICIENTS I SINE WAVE FIT CUMULATIVE MEANS FOURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH 2D 3D U V W SPEED TH 50 21 13.7 14.1 14.1	5.541 497	0.00		'	661		2 - 2	253	138.2	12	1	-179	714	-16	281	1.001	61
63	63 29 248 131-3 17 17 -203 195 -25 283 135-1 189 30 278 133-9 18 17 -226 224 -24 322 135-1 189 189 272 2	FOURIER COEFFICIENTS CUMULATIVE HEANS CUMULATIVE HEANS FOURIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 51 120 110 110 110 110 110 110 110 110 11	63 29 248 131-3 17 17 -203 195 -25 283 133.7 18 17 -226 224 -24 322 135.1 18 20 278 133.7 18 17 -226 224 -24 322 135.1 18 22 278 232	CUMULATIVE HEANS FOURTER COEFFICIENTS V	0.451 197	0.46		•		174	54	546	137.6	20	9	-185	211	-23	287	0.04	21
CUMULATIVE HEANS CUMULATIVE HEANS V W SPEED TH 2D 3D U V W SPEED TH 185 143.7 185 14 232 143.2 15 14 -158 217 -11 272 143.7 186 19 243 140.7 14 11 -168 215 -13 276 141.9 187 23 244 139.6 16 13 -180 209 -19 280 141.9 180 24 252 136.8 17 14 -190 212 -20 290 138.5 UME MINUTE STANDARD DEVIATIONS V W SPEED TH U V W SPEED TH V W SPEED TH U V W SPEED TH 23 11 24 8.6 30 28 5 11 8.5 24 11 24 8.6 30 28 5 11 8.5 25 19 31 15.0 73 24 15 9 16 6.0 26 14 27 6.1 29 17 9 16 6.0	CUMULATIVE HEANS CUMULATIVE HEANS FOURTIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 185 11 272 143.7 185 11 272 143.7 18 18 18 18 18 18 18 18 18 18 18 18 18	CUMULATIVE MEANS CUMULATIVE MEANS FOURIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 186 217 -11 272 143.7 143.7 146.9 16 13 -156 217 -13 276 141.9 162 21 244 139.6 16 13 -173 214 -17 280 139.9 177 23 245 137.6 16 13 -173 214 -17 280 139.9 177 23 245 137.6 16 14 -190 212 -20 290 130.5 180 24 252 136.8 17 14 -190 212 -20 290 130.5 180 24 252 136.8 17 14 -190 212 -20 290 130.5 180 24 252 136.8 17 14 -190 212 -20 290 130.5 180 24 252 136.8 17 14 -190 212 -20 290 130.5 180 24 252 136.8 17 14 -190 212 -20 290 130.5 180 24 252 136.8 17 14 -190 212 -20 290 130.5 180 24 252 136.8 17 180 20 20 20 20 20 20 20 20 20 20 20 20 20	CUMULATIVE HEANS CUMULATIVE HEANS V	CUMULATIVE HEANS FOURIER COEFFICIENTS V W SPEED TH 2D 3D V W SPEED TH 21 272 143.7 185 14 232 143.2 15 14 -158 215 -11 275 143.7 186 21 243 190.7 14 11 -168 215 -13 276 141.2 187 243 190.7 14 11 -168 215 -13 276 141.2 187 243 190.7 14 11 -168 215 -13 276 141.2 187 243 190.7 14 11 -168 215 -13 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 130.5 180 24 137.6 16 14 -190 212 -20 290 130.5 180 24 13 13.6 16 14 -190 212 -20 290 130.5 180 24 15 27 14 27 17 18 18 18 18 18 18 18 18 18 18 18 18 18	59 281 137.4 -	137.4		•	181	163	58	248	131.3	17	17	-203	224	-25	322	135.1	23
CUMULATIVE MEANS FOURIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH 2D 30 U V W SPEED TH 185 16 232 143.2 15 14 -158 217 -11 272 143.7 186 19 243 140.7 14 11 -168 215 -13 276 141.2 187 23 245 137.6 16 14 -180 209 -19 281 139.4 177 24 139.6 16 14 -180 209 -19 281 139.4 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 20 20 21 25.0 290 138.5 20 20 21 25.0 290 138.5 20 20 20 20 20 20 20 20 20 20 20 20 20 2	CUMULATIVE HEANS FOURIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 185 11 27 143.7 186 19 243 140.6 14 11 -168 215 -13 276 141.9 187 23 244 137.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -180 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 180 27 10 24 25 20 8 20 7.1 24 18 27 6.1 29 17 9 16 6.0 25 14 27 6.1 29 17 9 16 6.0 26 14 27 6.1 29 17 9 16 6.0 27 14.09 28 20 7.1 29 20 14.09 20 14.09 20 14.09 20 14.09 20 15.4 20 15.4 20 15.4 20 15.4 20 15.4 20 15.4 20 15.4 20 16.5 20 17.5 20 18.	CUMULATIVE HEANS FOURIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 185 16 213 272 143.7 185 16 23 143.7 14 11 -168 215 -13 276 141.9 186 21 244 139.6 16 13 -173 214 -17 280 141.2 187 23 245 137.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -180 209 -19 281 139.4 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 180 24 25 2 36.8 20 8 20 7.1 24 11 24 8.6 30 28 5 11 8.5 25 14 27 6.1 29 17 9 16 6.0 26 14 27 6.1 29 17 9 16 6.0 27 11 29 21 15.4 28 18 27 6.1 29 17 9 16 6.0 29 18 27 7.4 52 32 17 41 8.4 FOUNLATIVE STANDARD DEVIATIONS CUMULATIVE STANDARD DEVIATIONS	CUMULATIVE HEANS FOURIER COEFFICIENTS 1 SINE MAVE FIT V W SPEED TH 2D 3D V W SPEED TH 185 16 232 143.2 15 14 -158 215 -13 27 143.7 186 19 243 140.7 14 13 -15 3 214 -17 280 141.2 187 24 137.6 16 14 -180 209 -19 280 141.2 180 24 137.6 16 14 -190 212 -20 290 138.5 180 24 137.6 16 14 -190 212 -20 290 138.5 180 24 137.6 16 14 -190 212 -20 290 138.5 180 21 7.6 16 17 14 -190 212 -20 290 138.5 23 18 27 7.4 52 32 17 41 8.4 CUMULATIVE STANDARD DEVIATIONS CUMULATIVE STANDARD DEVIATIONS CUMULATIVE STANDARD DEVIATIONS FOURIER CUEFFICIE.TS 1 SINE MAVE FIT V M SPEED TH V W SPEED TH V M SPEED T	CUMULATIVE HEANS FOURIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 2B 11 272 143.7 185 14 232 143.2 15 14 -158 215 -13 276 141.2 186 19 243 140.7 14 13 -173 214 -17 280 141.2 187 23 245 137.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -180 209 -19 280 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 2	322 132.8	132.8		•	107	681	30	917		-	-	:		k			
CUMULATIVE HEANS CUMULATIVE HEANS V W SPEED TH 2D 3D U V W SPEED TH 185 14 212 -11 272 143.7 185 14 212 21 244 139.6 16 13 -173 214 -17 280 141.2 180 20 2 2 2 2 2 4 139.6 16 13 -173 214 -17 280 141.2 180 2 2 2 2 2 2 4 139.6 16 13 -173 214 -17 280 141.2 180 2 2 2 2 2 2 2 4 139.6 16 13 -173 2 14 -19 2 8 1 139.4 17 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	CUMULATIVE HEANS CUMULATIVE HEANS FOURIER COEFFICIENTS 1 SINE MAVE FIT V W SPEED TH 2D 30 U V W SPEED TH 185 16 232 143.2 15 14 -158 217 -11 272 143.7 186 19 243 140.7 14 11 -168 215 -13 276 141.9 187 23 245 137.6 16 13 -173 214 -17 280 141.2 187 23 245 137.6 16 13 -170 212 -20 290 138.5 189 24 252 136.8 17 14 -190 212 -20 290 138.5 189 24 252 136.8 17 14 -190 212 -20 290 138.5 189 24 252 136.8 17 14 -190 212 -20 290 138.5 189 24 25 136.8 17 14 -190 212 -20 290 138.5 189 24 25 2 36 20 8 20 7.1 26 19 27 6.1 29 17 9 16 6.0 27 15.4 28 19 27 6.1 29 17 9 16 6.0 29 19 27 6.1 29 17 9 16 6.0 20 11 8.5 20 11 8.5 21 15.4 22 15.4 23 18 27 7.4 52 32 17 41 8.4	CUMULATIVE MEANS FOURIER COEFFICIENTS V W SPEED TH 20 30 U V W SPEED TH 51 185 114 -158 217 -111 272 143.7 186 19 243 140.7 14 -158 217 -111 272 143.7 180 180 243 140.7 14 -158 217 -113 272 143.7 180 180 243 140.7 14 -158 217 -113 272 143.7 180 19 243 140.7 14 -158 219 -17 280 141.9 19 19 19 19 19 19 19 19 19 19 19 19 19	CUMULATIVE HEANS FOURTER COEFFICIENTS V W SPEED TH 2D 3D V V W SPEED TH 58 217 -11 272 141.9 185 14 23 143.2 15 14 -158 215 -13 276 141.9 186 21 244 139.6 16 13 -173 214 -17 280 141.2 187 23 245 137.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -180 209 -19 280 130.5 180 24 25 136.8 17 14 -190 212 -20 290 130.5 180 24 25 136.8 17 14 -190 212 -20 290 130.5 180 24 25 136.8 17 14 -190 212 -20 290 130.5 180 24 25 2 136.8 17 14 -190 212 -20 290 130.5 23 11 24 8 27 6.1 2 9 17 9 16 6.0 24 19 27 6.1 2 9 17 9 16 6.0 25 14 27 6.1 2 9 17 9 16 6.0 26 14 27 6.1 2 9 17 9 16 6.0 27 19 27 6.1 2 9 17 9 16 6.0 28 19 27 7.4 52 32 17 41 8.5 29 19 27 8.6 30 28 5 11 8.5 20 19 28 8.1 8.5 20 19 28 8.1 8.5 20 19 28 8.1 1 9.5 20 19 28 8.1 1 9.5 20 19 28 8.1 1 19 10.8	CUMULATIVE HEANS FOURIER COEFFICIENTS V W SPEED TH 2D 30 U V W SPEED TH 20 10 V W SPEED TH 20 10 V W SPEED TH 20 10 V W SPEED TH 20 21 2 17 11 272 141.97 14 10 V W SPEED TH 20 21 2 10 11 272 141.97 243 110.00																	
V W SPEED TH 2D 3D U V W SPEED TH 5185 16 232 143.7 185 16 232 143.7 193.7 186 19 243 140.7 14 11 16 20 217 -11 272 143.7 180 2 2 2 2 2 3 140.7 14 11 16 2 2 2 2 2 2 2 136.8 17 14 -190 212 -20 290 141.9 180.5 180 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	V W SPEED TH 2D 3D U V W SPEED TH 5185 16 212 -13 272 143.7 185 16 232 143.7 185 17 -11 272 143.7 185 16 212 -13 276 141.9 187 21 244 139.6 16 13 -180 209 -19 281 139.4 137 23 245 137.6 16 14 -180 209 -19 281 139.4 137 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 20 20 212 -20 290 138.5 20 20 212 -20 290 138.5 20 20 20 20 20 20 20 20 20 20 20 20 20	V W SPEED TH 2D 3D U V W SPEED TH 51	V W SPEED TH 2D 3D U V W SPEED TH 5 18 5 1 1 1 1 2 1 2 1 2 1 2 1 2 1 3 1 1 3 1 1 1 1	FOURIER COEFFICIENTS V W SPEED TH 2D 3D U V W SPEED TH 185 212 143.7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							Ď	ULATT	VE MEANS								
V W SPEED TH 2D 3D U V W SPEED TH 58 16 14 -158 217 -11 272 143.7 185 14 -158 217 -11 272 143.7 186 215 21 244 139.6 16 13 -173 214 -17 280 141.9 177 23 244 139.6 16 13 -173 214 -17 280 141.9 177 23 244 139.6 16 14 -190 209 -19 281 139.4 177 24 252 136.8 17 14 -190 212 -20 290 138.5 180 20 W SPEED TH U V W SPEED TH U V W SPEED TH U V W SPEED TH 24 8.6 30 28 5 11 8.5 4 11 24 8.6 30 28 5 11 8.5 4 15 21 15.4 27 15 21 15.4 27 15 21 15.4 27 15 21 15.4 27 15 21 15.4 27 15 21 15.4 27 15 21 15.4 27 15 21 15.4 27 17 41 8.4	V W SPEED TH 2D 3D U V W SPEED TH 58 16 232 143.2 15 14 -158 217 -11 272 143.7 185 15 21 244 139.6 16 13 -173 214 -17 280 141.2 187 23 244 139.6 16 13 -173 214 -17 280 141.2 177 23 244 139.6 16 14 -180 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 204 ENT ENTER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED TH V V W SPEED TH U V W SPEED TH 27 641 8.4	V W SPEED TH 2D 3D U V W SPEED TH 5B 185 16 212 -11 272 143.7 186 18 212 -13 276 141.9 182 21 244 139.6 16 13 -173 214 -17 280 141.2 187 21 244 139.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -190 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 11 24 8.6 30 28 5 11 8.5 20 20 20 20 20 20 20 20 20 20 20 20 20	185 16 232 143.2 15 14 -158 217 -11 272 143.7 185 16 22 243 140.7 14 11 -168 215 -13 276 141.9 186.2 21 244 139.6 16 13 -173 214 -19 20 141.2 187.1 177 23 245 137.6 16 14 -180 209 -19 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 18 21 24 27 24 15 21 15.4 27 25 11 24 27 25 12 24 15 20 20 20 20 20 20 20 20 20 20 20 20 20	V W SPEED TH 2D 3D V W SPEED TH 59 143.7 1185 14 -159 217 -11 272 143.7 186 19 243 140.7 14 11 -168 215 -13 276 141.9 187.2 13.2 144.1 139.6 16 13 -173 214	PEAKS	-	-			FOUR	ER	OEFF1	CIENTS		-		SINE	WAVE	-11		
185 16 212 143.2 15 14 -158 217 -11 272 143.7 185 16 19 243 140.7 14 11 -168 215 -13 276 141.9 187 21 244 139.6 16 13 -173 214 -17 280 141.2 187 21 244 139.6 16 13 -173 214 -17 280 141.2 180 22 21 244 139.6 16 14 -180 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 13 24 13 24 8.6 30 28 20 18 20 7.1 24 8.6 30 28 20 8 20 7.1 24 8.6 30 28 20 8 20 7.1 24 8.6 30 28 20 8 20 7.1 24 8.6 30 28 20 8 20 8.5 20 8.	185 16 212 143.2 15 14 -158 217 -11 272 143.7 185 16 19 243 140.7 14 11 -168 215 -13 276 141.9 182 21 244 139.6 16 13 -173 214 -17 280 141.2 180 209 -19 241 139.4 177 23 244 139.6 16 14 -190 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 137.6 16 14 -190 212 -20 290 138.5 180 24 13 24 14 27 8.6 30 28 8 20 7.1 8.5 4 17 24 8.6 30 28 8 20 7.1 8.5 4 18 27 7.4 52 32 17 41 8.4 6.0 5.0 20 2.1 15.4 6.0 5.0 2.1 15.4 6.0 2.1 2.1 15.4 6.0 2.1 1	185 16 212 143.2 15 14 -158 217 -11 272 143.7 185 16 19 243 140.7 14 11 -168 215 -13 276 141.9 182 21 244 139.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -190 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 137.6 16 14 -190 212 -20 290 138.5 180 24 13 24 13 13 13 14 11 24 8.6 30 28 5 11 8.5 20 7.1 24 15 27 6.1 29 17 9 16 6.0 20 20 20 20 20 20 20 20 20 20 20 20 20	185 16 222 143.2 15 14 -158 217 -11 272 143.7 185 18 22 144.9 18 -158 21 2.14 -19 243 140.7 14 11 -168 215 -13 276 141.9 187.2 187.2 144.1 137.6 16 13 -173 214 -19 280 144.2 187.6 16 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 18 20 20 15.4 20 20 20 10.5 17 17 18 18 10 20 20 20 10.5 17 18 10 20 20 20 20 20 20 20 20 20 20 20 20 20	185 16 24 143.2 15 14 -158 217 -11 272 143.7 185 16 21 244 139.6 16 13 -173 214 -19 280 141.2 187 244 139.6 16 13 -173 214 -19 281 141.2 187 244 139.6 16 14 -180 209 -19 281 139.9 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 18 -190 212 -20 290 138.5 18 21 15.0 29 20 8 20 7.1 2.2 23 11 2.4 20 7.1 2.4 15 21 15.4 20 10.0 20 8 20 8 20 7.1 2.4 15.4 20 10.0 20 8 20 8 20 7.1 2.4 15.4 20 10.0 20 8 20 17 41 8.4 15.4 20 10.0 20 8 20 17 41 8.4 15.4 20 10.0 20 8 20 17 41 8.5 20 10.0 20 8 20 20 17 41 8.5 20 10.0 20 20 20 20 20 20 20 20 20 20 20 20 20					:	,		0	1	20	30	0	>	3	S	ī	SP
185 15 21 244 139.6 16 13 -153 214 -17 280 141.9 186 29 243 140.7 14 11 -168 215 -13 276 141.9 187 23 244 139.6 16 13 -173 214 -17 280 141.2 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 CURFER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED TH V W SPEED TH S	185 15 21 244 139.6 16 13 -173 214 -17 280 141.2 186 21 244 139.6 16 13 -173 214 -17 280 141.2 187 23 245 137.6 16 14 -180 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 24 11 24 8.6 30 28 5 11 8.5 25 19 31 15.0 7.6 36 5 11 8.5 26 19 27 7.6 36 20 8 20 7.1 27 6.1 29 17 9 16 6.0 28 14 27 6.1 29 17 9 16 6.0 29 18 27 7.4 52 32 17 91 8.9	185 15 24 141.9 186 19 244 140.7 19 244 139.6 16 13 -173 214 -17 280 141.2 180 21 244 139.6 16 14 -180 209 -19 281 139.4 177 23 245 137.6 16 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 135.6 19 31 15.0 24 15 21 15.4 25 14 27 6.1 26 14 27 7.6 26 15 14 139.4 27 6.1 28 20 174 28 20 18.5 29 17 9 16 6.0 29 18 6.0 20 18.5 21 15.4 22 6.1 24 27 7.4 25 32 17 41 8.4 27 6.1 28 18 27 7.4 28 18 6.0 29 18 6.0 20 18.5 20 18.6 20 18.5 20 18.6 20 18.5 21 15.4 21 15.4 22 6.1 23 17 41 8.4 24 15 27 7.4 25 32 17 41 8.4	185 17 23 140.7 14 11 -168 215 -13 276 141.9 180 21 244 139.6 16 13 -173 214 -17 280 141.2 180 24 139.6 16 14 -190 212 -20 290 139.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 180 24 25 136.8 17 14 -190 212 -20 290 138.5 180 24 27 24 27 24 27 24 27 27	185 17 232 140.7 14 11 -168 215 -13 276 141.9 180 24 139.6 16 13 -173 214 -17 280 141.2 177 23 244 139.6 16 13 -173 214 -17 280 139.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 -190 212 -20 290 138.5 20	SPEED TH	SPEED TH			o !	> 0		22.5	143.2		7	-158	217	-		143.7	61
180	180	180	180	1902 17 244 139.6 16 13 -173 214 -17 280 141.2 177 23 245 137.6 16 14 -180 209 -19 281 139.4 177 23 245 137.6 16 14 -180 209 -19 281 139.4 180 24 252 136.8 17 14 -190 212 -20 290 138.5 180 24 252 136.8 17 14 14 8.5 23 4 11 24 8.6 30 28 5 11 8.5 24 11 24 8.6 30 28 8 20 7.1 25 19 31 15.0 73 24 15 21 15.4 26 14 27 6.1 29 17 9 16 6.0 33 18 57 7.4 52 32 17 41 8.4 27 6.1 29 17 9 16 8.5 26 14 27 7.4 52 32 17 41 8.4 27 7.4 52 32 17 19 10.8 27 19 25 8.1 34 24 7 16 7.7 28 10 25 8.1 34 24 7 16 7.7 29 10 25 8.1 34 24 7 16 7.7 20 10.5 47 25 13 11 18 10.0	5.69 143.5	5.69 143.5		1	135	581	4 0	232	7 . 6 . 1	7	: =	-168	215	-13		141.9	61
177 23 245 137-6 16 14 -180 209 -19 281 139-4 180 24 252 136-8 17 14 -190 212 -20 290 138-5 180 24 252 136-8 17 14 -190 212 -20 290 138-5 0NE MINUTE STANDARD DEVIATIONS V W SPEED TH U V W SPEED TH V W SPEED TH U V W SPEED TH 23 11 24 8-6 30 28 5 11 8-5 23 8 21 7-6 36 20 8 20 7-1 24 12 31 15-0 73 24 15 21 15-4 25 14 27 6-1 29 17 9 16 6-0 33 18 57 7-4 52 32 17 41 8-4	177 21 245 137-6 16 14 -180 209 -19 281 139-4 180 24 252 136-8 17 14 -190 212 -20 290 138-5 180 24 252 136-8 17 14 -190 212 -20 290 138-5 FUURIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED TH 34 11 24 8-6 30 28 5 11 8-5 25 19 31 15-0 73 24 15 21 15-4 26 19 31 15-0 73 24 15 21 15-4 27 6-1 29 17 9 16 6-0 33 18 57 7-4 52 32 17 41 8-9	177 23 245 137-6 16 14 -180 209 -19 281 139-4 180 24 252 136-8 17 14 -190 212 -20 290 138-5 180 24 252 136-8 17 14 -190 212 -20 290 138-5 FUURIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED TH 34 11 24 8-6 30 28 5 11 8-5 25 19 31 15-0 73 24 15 21 15-4 26 14 27 6-1 29 17 9 16 6-0 33 18 57 7-4 52 32 17 41 8-4 CUMULATIVE STANDARU DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT	FOURTER COEFFICIENTS CUMULATIVE STANDARD DEVIATIONS V M SPEED TH U V W SPEED TH S	FUURTER COEFFICIENTS FUURTER COEFFICIENTS TOTAL ATTEMPT OF STANDARD DEVIATIONS TOTAL ATTEMPT OF STANDARD S	8 275 146.3	275 146.3		•	5	90		243	36.6		13	-173	214	-17		141.2	20
180 24 252 136.8 17 14 -190 212 -20 290 138.5 UNE MINUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED TH 34 11 24 8.6 30 28 5 11 8.5 23 8 21 7.6 36 20 8 20 7.1 24 15 21 15.4 25 19 31 15.0 73 24 15 21 15.4 26 14 27 6.1 29 17 9 16 6.0 33 18 57 7.4 52 32 17 41 8.4	180 24 252 136.8 17 14 -190 212 -20 290 138.5 UNE MINUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED TH 34 11 24 8.6 30 28 5 11 8.5 23 8 21 7.6 36 20 8 20 7.1 24 19 31 15.0 73 24 15 21 15.4 25 19 31 15.0 73 24 15 81 15.4 26 19 27 6.1 29 17 9 16 6.0 33 18 57 7.4 52 32 17 41 8.4	FOURTER COEFFICIENTS ONE MINUTE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH V W SPEED TH V W SPEED TH S4 11 24 8.6 30 28 5 11 8.5 24 12 31 15.0 73 24 15 21 15.4 25 19 31 15.0 73 24 15 21 15.4 26 14 27 6.1 29 17 9 16 6.0 CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT	FOURTER COEFFICIENTS CUMULATIVE STANDARD DEVIATIONS SA 11 24 8.6 30 28 5 11 8.5 23 8 21 7.6 36 20 8 20 7.1 24 11 24 8.6 30 28 5 11 8.5 25 19 31 15.0 73 24 15 21 15.4 26 19 31 15.0 73 24 15 81 5.4 27 19 31 15.0 73 24 15 81 5.4 28 19 27 6.1 29 17 9 16 6.0 CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS V W SPEED TH U V W SPEED TH V W SPEED TH S 1 81NE WAVE FIT 27 10 25 8.1 39 28 5 11 8.5 27 14 26 10.9 50 23 11 18 10.0	FOURTIER COEFFICIENTS CUMULATIVE STANDARD DEVIATIONS SA 11 24 8.6 30 28 5 11 8.5 24 11 24 8.6 30 28 5 11 8.5 25 19 31 15.0 73 24 15 21 15.4 26 19 31 15.0 73 24 15 21 15.4 27 19 31 15.0 73 24 15 8.1 28 19 31 15.0 73 24 15 7.1 29 10 27 6.1 29 17 41 8.9 CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS FOURTER COEFFICIENTS FOURTER COEFFICIENTS 1	291 142.5	291 142.5		•	200	177	73	245	137.6	91	7	-180	508	-19		139.4	œ :
ONE MINUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED V W SPEED TH U V W SPEED 33 23 8 21 7.6 36 20 8 20 51 26 19 31 15.0 73 24 15 21 1 26 26 14 27 6.1 52 32 17 41 56 33 18 57 7.4 52 32 17 41	ONE MINUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 23 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 24 19 31 15.0 73 24 15 21 26 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS	ONE MINUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 33 23 4 11 24 8.6 30 28 5 11 34 21 24 3.6 3.6 20 8 20 26 26 14 27 6.1 29 17 9 16 26 33 18 57 7.4 52 32 17 41 FOURIER COEFFICIENTS I SINE WAVE FIT	ONE MINUTE STANDARD DEVIATIONS 125 34 11 24 8.6 30 28 5 11 24 12 24 34 12 24 15 25 34 11 24 8.6 30 28 8 10 26 23 18 21 5.6 36 20 8 20 26 23 18 27 7.4 52 32 17 41 58 33 18 57 7.4 52 32 17 41 50 10 11 24 8.6 30 28 5 11 50 10 11 24 8.6 30 28 5 11 51 10 24 8.6 30 28 5 11 52 34 11 24 8.6 30 28 5 11 53 24 10 25 8.1 34 24 7 16 54 27 10 25 8.1 34 24 25 11 19 55 27 10 25 8.1 18 56 27 10 25 8.1 18 57 10 25 8.1 18 58 27 10 25 8.1 18 58 27 27 27 10 25 8.1 18 58 27 27 27 27 11 58 27 27 27 27 27 27 27 27 27 27 27 27 27	ONE MINUTE STANDARD DEVIATIONS FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 33 23 8 21 12 24 8.6 30 28 8 11 24 25 14 27 6.1 29 15 21 25 14 27 6.1 52 17 16 26 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED V W SPEED TH U V W SPEED 42 27 14 26 8.1 34 24 7 16 44 27 14 26 10.9 50 23 11 19 45 27 14 26 10.9 51 25 13 29	5 290 139.4	290 139.4		7	11	180	5 4	152	136.8	1.7	_ T	061-	212	-20		138.5	:
FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 33 23 34 11 24 8.6 30 28 5 11 34 21 7.6 36 20 8 20 56 26 14 27 6.1 52 32 17 41 56 33 18 57 7.4 52 32 17 41	FUUMIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 34 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 24 19 31 15.0 73 24 15 21 25 19 31 15.0 73 24 15 21 26 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS	FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 25 34 11 24 8.6 30 28 5 11 26 26 19 31 15.0 73 24 15 21 26 26 19 31 15.0 73 24 15 21 26 26 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOURIER COEFFICIENTS I SINE WAVE FIT	FUUNIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 33 23 4 11 24 8.6 30 28 5 11 24 27 6.1 36 20 8 20 25 34 11 24 8.6 30 28 5 11 26 25 14 27 6.1 29 15 56 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOUNIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED V W SPEED TH U V W SPEED 25 34 11 24 8.6 30 28 5 11 26 27 10 25 8.1 34 24 7 16 27 10 25 8.1 34 24 27 11 28 27 10 25 10.9 30 23 11 19 11	FUURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 25 34 11 24 8.6 30 28 8 20 26 24 14 27 6.1 29 15 21 26 25 14 27 6.1 52 17 41 56 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOURIER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEED 42 27 14 26 8.1 34 24 7 16 44 27 14 26 10.9 50 23 11 18 44 27 14 26 10.9 51 25 13 29						ONE	DWIH			VIATIO	SNO						
V W SPEED TH U V W SPEED 34 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 26 14 31 15.0 73 24 15 21 1 26 14 27 7.4 52 32 17 41	V W SPEED TH U V W SPEED 34 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 24 19 31 15.0 73 24 15 21 25 19 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARU DEVIATIONS	V W SPEED TH U V W SPEED 34 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 24 19 31 15.0 73 24 15 21 25 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT	25 34 11 24 8.6 30 28 5 11 24 20 33 23 24 15 26 15 26 16 26 17 26 36 26 26 26 17 27 15 26 17 27 15 26 17 27 15 27 15 27 17 27 16 26 33 18 57 7.4 52 32 17 41 500HIER COEFFICIENTS 1 51NE WAVE FIT V W SPEED TH U V W SPEED V W SPEED TH U V W SPEED TH 24 27 10 25 8.1 34 24 27 16 25 10.5 47 23 11 18 11	25 34 11 24 8.6 30 20 8 20 11 24 27 6.1 29 17 9 16 20 8 20 8 20 8 20 8 20 8 20 8 20 8 20					•	URIER	COEF	FICIEN			SINE	WAVE	F11				
25 34 11 24 8.6 30 28 5 11 33 23 8 21 7.6 36 20 8 20 61 26 19 31 15.0 73 24 15 21 1 26 26 14 27 6.1 29 17 41 56 33 18 57 7.4 52 32 17 41	V W SPEED TH U V W SPEED 34 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 24 19 31 15.0 73 24 15 21 25 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS	25 34 11 24 8+6 30 28 5 11 3 2 3 2 1 1 2 4 8+6 30 28 5 11 2 6 3 2 2 1 1 2 6 3 6 1 2 6 1 1 1 1	25 34 11 24 8.6 30 28 5 11 24 8.6 30 28 5 11 24 8.6 30 28 8 11 24 20 31 25 11 24 15 20 12 12 25 14 25 11 25 14 27 7.4 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 32 17 41 52 34 11 24 8.6 30 28 5 11 19 11 24 8.6 30 28 5 11 19 11 18 18	25 34 11 24 8.6 30 28 5 11 24 8.6 30 28 5 11 24 20 31 25 11 25 12 12 12 12 12 12 12 12 12 12 12 12 12																	
34 11 24 8.6 30 28 5 11 23 8 21 7.6 36 20 8 20 26 19 31 15.0 73 24 15 21 1 26 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41	34 11 24 8.6 30 28 5 11 2	34 11 24 8.6 30 28 5 11 2 2 8.6 30 28 5 11 2 2 8 2 1 3 2 8 2 1 1 2 8 2 1 1 2 8 2 1 1 2 8 2 1 1 2 8 2 1 1 2 8 2 1 1 2 8 2 1 1 2 8 1 1 2 8 2 1 1 2 8 1 1 2 8 1 1 2 8 1 1 2 8 1 1 2 8 1 1 2 8 1 1 1 2 8 1 1 2 8 1 1 1 1	25 34 11 24 8.6 30 28 5 11 24 19 21 7.6 36 20 8 20 51 26 19 31 15.0 73 24 15 26 33 18 57 7.4 52 32 17 41 58 33 18 57 7.4 52 32 17 41 50UHIER COEFFICIENTS V W SPEED TH U V W SPEEU V W SPEED TH U V W SPEEU 25 34 11 24 8.6 30 28 5 11 24 27 10 25 8.1 34 24 27 16 27 10 25 8.1 34 24 27 18 18	25 34 11 24 8.6 30 28 5 11 24 12 7.6 36 20 8 20 25 19 31 15.0 73 27 9 16 26 33 18 57 7.4 52 32 17 41 58 33 18 57 7.4 52 32 17 41 59 10 24 52 32 17 41 50 UNIER COEFFICIENTS 1 51 NE WAVE FIT 50 UNIER COEFFICIENTS 1 51 NE WAVE FIT 60 UNIER COEFFICIENTS 1 51 NE WAVE FIT 7 10 24 8.6 30 28 5 11 7 10 25 8.1 34 24 7 16 7 14 26 10.9 50 23 11 19 7 27 14 26 10.9 51 25 13 29	A SPEED TH	Etu TH	ı	,	_	>		1.1	Ŧ	כ	>		P	-			
23 8 21 7.6 36 20 8 20 24 19 31 15.0 73 24 15 21 1 25 14 27 6-1 29 17 9 16 33 18 57 7.4 52 32 17 41	23 8 21 7.6 36 20 8 20 26 19 31 15.0 73 24 15 21 1 26 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS	23 8 21 7.6 36 20 8 20 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	33 23 8 21 7.6 36 20 8 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	33 23 8 21 7.6 36 20 8 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	61	0	11.4		25	34	=	54	9.9	30	2.8	S	= ;	ě,	ς.		
26 19 31 15.0 73 77 15 22 25 14 27 6.1 29 18 57 7.4 52 32 17 916	26 19 31 15.0 73 77 15 27 25 25 17 9 16 33 18 57 7.4 52 32 17 91 CUMULATIVE STANDARD DEVIATIONS	26 19 31 15.0 73 77 15 79 16 26 14 27 6.1 29 17 9 16 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT	56 33 18 57 7-4 52 32 17 41 56 33 18 57 7-4 52 32 17 41 50 18 57 7-4 52 32 17 41 50 18 57 7-4 52 32 17 41 50 18 51 51 51 51 51 51 51 51 51 51 51 51 51	56 26 14 27 6-1 29 17 9 16 56 33 18 57 7-4 52 32 17 41 56 33 18 57 7-4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED V W SPEED TH U V W SPEED 32 24 10 25 8-1 34 24 7 16 44 27 14 26 10-9 50 23 11 19 44 27 14 26 10-5 51 25 13 29	1.1	1.1	10.0		33	2.3	æ	17	1.6	36	20	10 0	2,1		- ;		
33 18 57 7.4 52 32 17 41	26 14 27 6.1 27 17 41 33 18 57 7.4 52 32 17 41 CUMULATIVE STANDARD DEVIATIONS	26 14 27 2-1 27 17 17 17 33 18 57 7-4 52 32 17 41 CUHULATIVE STALIDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT	26 26 14 27 0-1 27 17 17 18 18 18 27 1-1 27 17 18 18 18 27 1-1 27 17 18 18 18 18 18 18 18 18 18 18 18 18 18	26 26 14 27 6.1 27 17 17 18 18 18 18 18 27 7.4 52 32 17 18 18 18 18 18 18 18 18 18 18 18 18 18	5.4	5.4	10.5		19	54	10	7.	15.0	5 6		0					
	CUMULATIVE STANDARD DEVIATIONS	CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT	CUMULATIVE STANDARD DEVIATIONS CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED V W SPEED TH O V W SPEED 32 34 11 24 8.6 30 28 5 11 19 19	CUMULATIVE STANDARD DEVIATIONS CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE MAVE FIT Y M SPEED TH U V M SPEEU 25 34 11 24 8.6 30 28 5 11 32 24 10 25 8.1 34 24 7 16 44 27 14 26 10.9 50 23 11 18 42 27 14 26 10.5 51 25 13 29	22 11 12.B		12.8		56	56		27	- 1	2 2	32	17	. 4	. 6			
	CUMULATIVE STANDARD DEVIATIONS	CUMULATIVE STANDARD DEVIATIONS OURTER COEFFICIENTS 1 SINE WAVE	CUMULATIVE STANDARD DEVIATIONS FOURIER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEEU 25 34 11 24 8.6 30 28 5 11 32 24 10 25 8.1 34 24 7 16 44 27 14 26 10.9 50 23 11 19 1	CUMULATIVE STANDARD DEVIATIONS FOURTER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEED 32 34 11 24 8.6 30 28 5 11 34 27 14 26 8.1 34 24 7 16 44 27 14 26 10.9 50 23 11 18 42 27 14 26 10.5 51 25 13 29	3/	3/	5.		0	5	2										
OURIER COEFFICIENTS I SINE WAVE FIT			34 11 24 8.6 30 28 5 11 24 24 10 25 8.1 34 24 7 16 27 16 27 14 26 10.9 50 23 11 19 1	34 11 24 8.6 30 28 5 11 24 24 8.6 30 28 5 11 16 25 8.1 34 24 7 16 16 17 16 17 16 17 16 17 17 17 17 17 17 17 17 17 17 17 17 17	A SPEED TH	PEEU	7.4		٦	>	3	w		>	>	2	SPEEU	-			
FOURTER COEFFICIENTS I SINE WAVE FIT V W SPEEU	V M SPEED TH U V M SPEEU	V M SPEED TH U V M SPEED	24 10 25 8•1 34 24 7 16 16 17 19 17	24 10 25 8•1 34 24 7 16 12 27 14 26 10.9 50 23 11 19 1 27 14 26 10.5 47 23 11 18 1 29 1 29 1 29	61	61	4.11		75	3.4	-	5 4		30	28	2	Ξ.	œ ı	5		
FOURTER COEFFICIENTS 1 SINE WAVE FIT V W SPEED TH U V W SPEEU 75 31 11 24 8+6 30 28 5 11	75 34 11 24 8+6 30 28 5 11	75 3+ 11 2+ 0+6 30 28 5 11	27 14 26 10.9 50 23 11 19 1	27 14 26 10.9 50 23 11 17 17 22 27 14 26 10.5 47 23 11 18 1	19 19 10.8	0	10.8		3.2	5.4	0.	52		# C	24	` :	0 0	10	- 4		
FOURTER COEFFICIENTS I SINE WAVE FIT V W SPEED TH U V W SPEEU 25 34 11 24 8.6 30 28 5 11 32 24 10 25 8.1 34 24 7 16 19 1	25 34 11 24 8+6 30 28 5 11 32 24 10 25 8+1 34 24 7 16 32 24 10 25 8+1 34 24 7 16	25 34 11 24 8+6 30 28 5 11 32 24 10 25 8+1 34 24 7 16 19 1		23 14 26 10.5 7/ 25 13 29	7.7	7.7	11.6		J	27	- :	97		2 2	73	: =	- 18	10	~		

	°.																																
	3:35:			SP	- 8	22	1 5	5	52			9			0		-																
	START TIME			ĭ	144.2	136.6	136.4	135.4	137.5			1		7.65		138.0	137.9																
	STA		_	SPEED	285	312	295	301	330		-	2200	200	587	300	200	305																
∙06 ОН			WAVE FIT		+1-	-21	-23	-24	-28		MAVE FIT			-	0 0	- 20	-22				Ξ.		4	5.7	13.5			ī	7.3	7.6	7.2		,
F			SINE	>	230	724	213	213	239	•	SINE	,	. ;	230	177	320	224			111	SPEED	9 -	- 1	13	38		F 1.1	SPEEU	90 (20	3 -	75	}
AIRFORCE				ם	-164	-211	-202	-210	-215			;	0	-164	061-		-201			WAVE			13	01	17		WAVE		,	~ 0	- 0	2 -	:
A 2110			-			0	13	7	2		-		30	8-	_ :				SNO	SINE	>	5.4	15	22	7.0	S	SINE	>	54	31	17	37	,
•		.0		30	20	23	1 8	15	12				70	20	75	,			DEVIATION		>	28	22	25	7	11110		5	78	0.4	ر د ر	9.5	0
9/18/70		MINUTE MEANS	IENTS	Ŧ	140.1	134.7	134.5	132.0	135.3	E MEANS	: IENTS		I	140.1	137.2	136.4	135.7		STANDARD DE	1 51	ī	1.9	7 . 5	90	1.1	STANDARD DEVIATIONS	15	ī	9.1		9.9	• •	7.0
VAO		E MINU	COEFFICIENTS	SPFFD	238					CUMULATIVE	COEFFICIENT		SPEED	538	522	258	260	6		CUEFFICIENT	SPEEU	52	5.		32	E STA:	COEFFICIENT	SPEED	52	28	52	77	52
10 1		ONE	OURIER C		α	2.7	26	26	17	CUR	FOURTER			α_	23	5.4	25	5	MINUTE		3	4	ac =		91	CUMULATIVE		*	4	or i	0 1		
IN GHT			100	>	183		0 00	111	194		F 0.0		>	182	185	185	8 -	661	ONE	FOURTER	>	5.4	5.3		2.8	¥500	FOURTER	>	5.4	5.6	5.3	77	3.1
TIME				:			101-	96-	-192				n	-151	-171	-176	-182	0			כ	27	31	1.7	20			2	27	34	31	5.4	3.3
01154			-						139.2		-		ī	142.9	141.	140.1	138,5	134./		-	Ŧ.	9.6			13.7		-	r	0	10.5	10.0	10.2	10.7
VAD					202		5 .	505	329				SPEED	283	302	305	302	100			SPEED	1 3	27		7			PEED	-	53			
			PEARS				200	. 4	4 0		PF A K 5	1			7	7	4.7	5		PFAKS	5	1.0	2.0	3,5	34		PEARS		-	2.0	29	27	30
	+3.		1	,		. 77	5 7 9 9	777	643				^	524	117	5.28	113	177			,	35	æ :	7	57			,	35	42	34	0+	7
					5		207-	007-	-210				D	-160	-196	-130	06!-	***			5	3.7	7	7 .	200			0	3.7	541	43	74	5
	HE 1 GH I								r .s				Z	-	7	•	э В	-4	3		414	-	7	•) :	r .n			2		7		*	d)

		Ŧ	TH S	148.2 135.4	148.2 136.4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	WAVE FIT	F 1 T	F 1 T	F 1 4 4 4	F 1 4 8 8 8	5 2 2 4
	SINE	SINE >	S I N E V V 269	SINE V 269 227	SINE V 269 227 275	SINE 269 227 275 275 240
	-	- 0		211	21.3	21 -12 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
	415	~	~	7	7	714 20 3.7 27 2.8 14 2.6 18 17 17 17 18 19 19 17 17 17 17 17 17 17 17 17 17 17 17 17
	COEFFICIENTS	COEFF 1C1E	SPEED 14	SPEED 14	SPEED 272 14 285 13	SPEED 272 14 285 13 304 14
811 4100		3	3 -	3 - 6	3 - 20	3 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
-						7H U 42.8 -160 33.0 -202 46.4 -183
10			SPLED	SPLED 334 1	SPEED 2 334 1	SPEED 334 1 330 1
FEAKS			>	3 8	3 C 7	3 8 3 0
			2.	z -	2 - 4	***

3:40; 0				9 0	32	38	18 28				a	30	3.1	33	30																
START TIME END TIME 3				2	4	145.9	138.2					43.1	3,3	44.3	140.8																
	111		35.2	700	999	306	372		111		SPEEU	352	359	362	366																
06 OH	NAVE F	1	1 2	7.			-29		A A VE			-24	- 20	61-	-20			1		17.0	12.6	6.8	9.5			Ĭ		2 2	13.8	13.9	13.0
3	SINE	>	275		107	240	274		SINE		>	275	280	286	275		F11	9		37	54	23	30		111	SPEEU		3 4	32	30	30
AIRFORCE		:	- 204	007	1071	000	547-				D	907-	-201	+07-	-224		MAVE	3			13	=	Ξ		WAVE F			<u>-</u>	1.2	=	1.2
0115	-		- 0		0 0	- a	=		-		30	13	,	9	-	52	SINE	>		7.2	2.9	43	7 + 5	2	SINE	>		0 4	8 0	5.7	3
176		20	2 4 7		3 2	ח פ	2.1				20	54	6.3	17	23	EVIATION		-	7.0	0	09	52	5.2	IATION		0	7.0	11	7.0	7.2	6.8
9/18/76 UTE MEANS	ICIENTS	1	142.1		1 4 3 5 7	126.9	134.8	VE MEANS	CIENTS	,	-	4 2	7 1	7 0	138.2	STANDARD DE	1 2	ī	1.4.1	13.2	14.3	9.9	7.4	CUMULATIVE STANDARD DEVIATION	1 5.	11		10.0	15.0	15.1	13.7
T VAU	CUEFFI	Costas		30.3	204	350	329	CUMULATIVE	COEFFICIENTS		SPEED	767	167	067	303		DEFFICIENT	SPEED		3.7	3.2	2.2	3.1	STAN	FICIENT	9		90	3.5	0.6	33
U	FOURTER	*	2.7	4 1		30	3.8	n)	x			27	21	17	23	MINUTE	COEFF	3		15	61	7	•	ATIVE	COEFF	3	a	13	5.1	1.4	1 4
N 6 M	F00	>	223	227	223	210	553		FOURTE		>	V	40	4 6	224	ONE	DUMILER	,	3.3	15	4.5	6.4	*	LUMUD	OURIER	>	3.5	7	*	4.3	34
Σ 		ס	-179	-117	-170	-277	-232					-179	-176	0 0	-206		•	٥	7.0	00	99	20	÷		4	D	7.0	11	7.1	11	11
07154	-	11	125.7	126 4	0 1	129.2	133.3		-		I.		20.00		30.3		1.	11	37.2	31.3	15.6	10.0	7.		-	Ξ	37.2	32,8	27.6	24.3	22.1
2 2 3		SPEED	377	111	332	379	785			- 2	3	3/15	I	0.00	381			14.0 (4.0)	~	3.2	77	6-	76			4	(*)	33	30	27	5.0
	PEAKS			6.5	B.	-	**		PEAKS			1.7	17		. *		PEAKS	45	3.6	7	2.1	26	5		EAKS	35	3.0	3.9	33	31	36
÷		>	138	951	114	137	7.60			7		207	- 10	2 79					707	10	a) L	5.3	7			,		186	. 5 .	140	171
		3	5	2 6	26	-285	27					-250	in	1 13	N FN			0	0.6	2.4	0.0	m ;	6			0	0.6	8.3	51	44	9.0
nt 16n1		27 5	-	7	~	,	n.			1112		- 4	-	7				2 7	-	7	n	÷ .	n			1111	-		m	y .	E .

3:50: 0			SP	1.1	22	54	26	6-				9.5	17	19	2.1	22	22																			
START TIME END TIME			Ŧ	9.1.1	0.141	130.8	112.5	123.1				ĭ	141.8	141.4	137.9	130.8	129.3																			
•		F11	S					255			F17	S		5 299								1	~			7.7				I	.2		0.	4.4		
0 1		WAVE FIT	3	-23	- 28	- 23		-25			* A V E	3	- 2	-25	-2	-2	- 2				1	- '	Μ,	o u	. :	-								_	_	
y		SINE	>	233	233	192	96	138			SINE	>	233	233	219	181	176			111		SPEED	7.6	12	3.0	15			11	SPEED	2	2	2	32	3	
AIRFORCE			>	-183		-221	-220	-211				>	-183	-186	-198	-204	-205			WAVE		3	•	7 1	: :	20			X A V E	*				1.2		
0115		-	30		,			- 2			-	30		- 00	30	12	12		240	SINE		>	13	24	2 :	31		SNO	SINE					69		
1,6	15		70	-	2 -		0 -	7		n		20	-	2 =		51	1 5		DEVIATIONS	_		כ	28	35	0 .	21		DEVIATIONS	_	כ	2 8	30	31	54	8.7	
9/18/7	ONE MINUTE MEANS	IENTS	ī	137.4	0 0 0 0	0 0 0 0	0.071	123.6	2	T ACAN	1ENTS	1	137.4	38.	135.0	128.8	127.8		ANDARD D	5.		Ŧ	4.3	9.9	U .	11.8		JARD DE	1.5	I	4.3		3 0	13.1	12.2	
0 V	E MINU	COEFFICIENTS	0	,,,				225		CUMULATIVE	COEFFICIENTS	۵		017	273	25.8	252		5	COFFFICIENT		SPEED	27	56	2	21	•	E STANDARD	FICIENT	Object		17	22	32	33	,
5	NO	URIER C	U	1	52	30	× ×	32		200	OURIER	3		57	, A	240	56		MINUTE				7	1.2	17	m o		CUMULATIVE	H COEF				0.	2.7	12	
IN 6NI		100	3		207	502	169	123			100	2		207	103	142	155		3 NO	FOURIER		>	-	5.2	52	3 -	•	CUM	FOURTE	>		= :	1 7	2 0	55	,
11 11			:	0	-185	- B -	-208	-197					0		2 -	107	261-)	3.2	34	9	200	•			-		32	3.0	24	200	
01154		1		I	H. 3	8.2	0.2	116.1			-			~	ا س	.,	136.5	•		-		Ŧ		3.	•	50.5	,		-	2		0.01	7.5	10.7	7.5	•
× C 4 ×				4	167	314	667	5 4 7				1	SPEEU	167	306	303	187					0334	~	7	7.5	17	-				200	30	32		7 7	,
		EAKS		2	20	- x	6.5	5.7			PEAKS			20	99	200	y 0	,		S × 9		3	1 2	27	11	22	57		PEARS			17	52	77	7 7	,
•		O.		>	512	134	617	507					>	417	977	177		7/1				,		3.1	34	19	,				>	36	33	3.3	13	99
•				ס	-195	-208	- 186	-205					-	561-	-507	161-	5	107-				- 13	2	25	O G	3.7	97				0	9.	36	25	3 3	
11681								* 4					: :	1	7		э. В	n -4	6			Ξ.		, 7	6	*	Ω			-	NIN	-	2	•	,	D

3:45: 0			4	17	71	200	53	22						17	27	25	54																
START TIME END TIME 3			2	1.3	41.5	23.6		1.7.1				•	n				127.7																
· ν ω	1.1	1	SPEED	312	330	301		152			F11		2722	312	316	302	292																
40 % OH	WAVE FIT		*	-20	87.	-20		- 9			WAVE F	1		07.		-17	-17				I	3.6	4.8	0.0	27.9			ĭ	1.4	10.7	13.5	19.0	21.5
3	SINE	3		242	255	164		0 - 1			SINE	>		7.7	222	1 6 1	175			F11	SPEED	34	36	7	0 50		F11	9	34	35	3.1	36	38
AIRFOR			0	-195	7671	-246	-214	-203				:		0 0	-211	-212	-210			MAVE		^	1.5	22			MAVE F	3	1	10	*	- 5	-2
0115	-		00	9	23	1.7	22	23			-		2 -	0 -	20	20	2.1		50 20	SINE	>	1.6	7.7	T :	0.00	5	SINE	>	9	2.6	99	63	* C -
/7 b		0	2	6 1	34	54	24	23		S		20		2.1	26	26	52		VIATIONS		0	36	æ :	- o	- 1	DEVIATIONS		o.	36	7	4.5	0+	36
T VAD 9/18/76 ONE HINUTE MEANS	COEFFICIENTS	1		138.1	136.5	121.9	113.2	116.6		MEAN	DEFFICIENTS	ï		137.3	132.4	127.8	125.4		ANDARD DE	1 51	ī	3.4	17.7		23.0			ī	3.4	12.7	13.8	17.6	- 6 -
VAD NE MIN	COEFFI	01100	4 (260	248	252	226	223		CUMULATIVE	CUEFFI	Object	, ,	200	253	247	147		5	FFICIENT	SPEED	50		0 0	25	STANDARD	COEFFICIENT	4	5.0	35	3.4	36	35
U	FOURTER	3		7	æ	1.7	0	20		0.0	OURIER		-	7		9	17		MINUTE	COEFF		5		67	1.5	CUMULATIVE	COEFF	3	15	13	17	- 2	1.5
IN 6MT	F 0 U	>		145	173	130	95	103			100	>	163	α	9	641	~		ONE	OURIER	>	31	52	11	14	CUMUL	OURIER	>	3.1	4.5	6 5	63	T C
7 1 2		=		7/11	-162	-211	-192	-183				2	-174	-147	-181	-184	-184				2	2 +	20.0	7 0	50		•	2	7 4	2	6 7	J :	3
01154	-	1			43.	30.	17.	128.2			-	ĭ	138.9	7	137.8	133.0	132.0			-	I		210	6.7	11.7		-	ı	0	2.	16.3		'n
4		Spero		115	360	304	157	552				SPLED		340	329	311	667				111	36	p =	2.1	7			ELD	36	14	643	200	0
	PEARS	*	5 5		r	5	47	3			PEAKS		+	6.9	29	28	26			PEAKS	,	17	17	27	28		PEAKS	8	53	36	35	+ 6	35
÷		>	- 74	2	E	000	N	10				>	235	657	736	807	141				,	7	0 0	33	9+			>	34	00 1	00	0 -	10
1641		0	- 204	202	-207	-515	-224	1001				D	-206	-207	-210	-213	- 503				5 .	000	2 4	9!	57			2	20	99	4 .	100	76
HE 16		N I W	-		7	•	2	un				NIN	-	7	3	J	ь В-	47	7		 -	- 0	, ~	*	5			2 2	-	7	e 3	· vi	5

	3:50: 0						~ .	m .	n 4																													
	-	,			SP	2	7	5	5 6						20	23	22	54	27																			
	START TIME				Ξ.	130.1	123.5	0.07	121.6						ı	130.1	127.0	125.0	130.5																			
.06	1 S T		F11		SPEED	152	977	700	274				F17		0	_	2	~	257																			
HD 3			MAVE	3		17-	1 1		-23				WAVE F		3	-21	-16	0						I	5	5		20.4					I	5.0	4.7	17.4	20.1	18.6
8CE			SINE	>		101	10	-	7 7				SINE		>	9	7 .	7 1	156			FIT	L	SPEED	32	37	63	2 2			F 1.1		PEED				2.0	
AIRFOR				=	0	1 1 8 2	1 0	-	-229						0 1	061-	1 86		181-			WAVE F			9	•	0	0 0			WAVE F		3	œ	0	1.5	13	1.3
0115			-	9	-	22		9	13				-	í	0.5	~	- 1		9			SINE	3	> 1	20	74	123	. t			SINE	;	>	5.6	8	16	30.	2
176		SN		50	1	15	6	22	1.7		10			00			20	0 0	20	DEVIATIONS			-	, ,	97	- 0	000	13	DEVIATIONS			=	5 6	5.8	2.5	0	59	10
9/18/7		MINUTE MEANS	COEFFICIENTS	ī	126.8	121.9	1.8.4	143.1	120.6		CUMULATIVE MEANS		EFFICIENTS	1			122.6			ANDARD DE		2	ı	. 3			20.8	7.8			5 1	1.			· ·	1.11	20.4	
047		ONE MIN	CUEFFI	SPEED	21	204	524	528	234		ULATIN		COEFFIC	9	2 .	0	215	227	228	5.1		FICIENTS	PEFU	4	2 5	, ,	0 0	30	STAHDARD		101641	-	j.	3.5	30	7+	5.0	
1 01		0	OURIER		9	9 !	17	2.5	25		CUR		r w	01			1			MINUTE		COEFF	S		10	20	17	1.5	TIVE		0 E F F	3 P	1		-	2 3		
IN GM			FOU	>	129	103	75	761	171				2002	>	128	0	105	129	127	OME		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	>	2.3	4.5	121	1	7	CUMULATIVE		OURIER C	>	2.4	7 0	7.4	7.0	12	
71ME				כ	-172	-168	-176	-153	-101-					D	-172	-171	-172	-167	211.				0	3.2	1.7	8.9	+6	91			0 4	2	3.2	25.	2 7	0 4	4	
01154			-	T.	122.2	158.1	4 00	0 .	~							24.9	32.5	30.9					T.H.	8.7	12.1	32.6		43.4			-	H	9.7	10.7	22.4	6.61	25.0	
C 4 >				SPEEU	157	731	435	747	407					PEEU	157		245						w.	35	3.5	9,	7 7	4.5					35					
			E A K S		6.9	21	2.5	7 .	0.0			FAKS		S	59	45	0- 1	22	9		S X A		₩ SPE	25	2.3	5.2	5.5	36			0 % 0	SPE	5	3.2	3.0	3.1	3.2	
			•	>	136	7	175	1 7				4		>	-	7	651	0	n		5.		,	7+	5.5	4.3	9.2	-		1	L		2.5	95	1+1	25	n 9	
				5	-514	-	1 1%	-						0	-514	161	-146	741	D 12				5	33	3	4	30	0				0	3.3	3.4	76	+ 6	0.0	
не 16н				z E										2 2										-			,						-				_	
																	I	3.	48																			

3:50: 3:55: 0		26	22	25	17	22	23				SP	22	54	22	22														
START TIME		-	133.7	132.1	127.6	130.0	129.9				ĭ	33.	32.	31.	130.7														
ENG	-	SPEED	592	251	243	310	596			-	SPEED	265	258	253	267														
	AVE FIT		9	-	-24	-33	-24			WAVE FIT		-18	-14	- 8	-21			I	4 . 8	5.5	2.0	13.5			ĭ	. 7	5.0	5.5	7 . 4
	SINE W	>	183	691	147	201	190			SINE	>	183	176	167	178		-	PEE	57	47	17	4 4		111	SPEED	r	20	7	6 7
)	061-	-183	-192	-228	-216				>	0	8	00	-197		WAVEF	3	7	•	S	17		MAVE	*	1	1	c 0	10
	-		^	9	2	9	13			-	30	11	91	91	5 5	5 2	SINE	>	4.5		0	73	v.	SINE	>	4.5	1	39	0.5
10		70	53	54	70	27	13				70	23	54	22	24	EVIATION		>	7	27	58	33	DEVIATION		D	7	33	31	34
MINUTE MEANS	CIENTS	I	3	28	26	129.8	129.1	2	4	TENTS	ī	131.1	129.7	158.7	129.0	STANDARD DE	1 5 1	I	3.9	7		9.01	STA INARD DEV		I	3.9	4.5	7.9	7.3
ONE MINU	COEFFIC	SPEED	237	208	211	272	256		MULAIIVE	COEFFICIENTS	SPEED	237	222	218	231		FICIENT	SPEED	6	37	2 8	33		FICTENT	SPEED	2	43	3.6	7
0	OURIER		20	20	7.1	3.6	53			DURIER		2.0	20	20	25	MINUTE	COEF	3	1	1.2	0.	~ ?	CUMULATIVE	COFF	7	1	0	0	1 2
	FOU	>	155	131	173	175	162			100	>	5	J	~	4 5	ONE	OURIER	>	3.)	3.8	<u>+</u>	524	0 # 0 0	OURIER	>	3.0	3.5	31	7
		>	-111	11411	171-	-203	761-				⊃	-177	-168	-168	-176)	40	11	0+	23			D	9.0	3.0	3.5	33
	-						124.7			-	ī	37.	137.8	30.	130.0		-	11	8.9	15.4	29.6	13.2		-	111	8.9	10.5	50.02	19.4
		SPEED	274	754	7	113	867				SPEEU	774	697	155	275			SPEED	5.4	4.7	53	3.5			SPEED	2	2.0	4.5	5.0
	PEAKS		9	1.7	7 3	1 12	200			PEAKS	7	14	37	74	25		P. A. K. S	\$	2.2	5.4	_	7.75		PEAKS	₹	~	3.2	27	3.6
•		>	507	0	7111						>	5117	9	101	174			>	19	99	110	10			,	67	,	15	D
# #		5	121-	-4-1		-7.46	-236				0	1111-	-167	-175	-189			0	22	2.2	0.1	32			5	11	2.3	7 1	3.6
11£ 1511		z I z					۰.۰				z E	-	. 7		т .o В -	,		NIN	-	7	3	Ţ.Ω			2		. 7	3	•

	3:55: 0 4: 0: 0			40	22	56	6	30					24	22	23	52																
	RT TIME TIME			Ξ.	1001	25.9	34.5	135.9			3			25.2	-	26.1																
.06	STA	F11	-	S				333		F11	9	,									,	-	2	7					7	0	~ 1	• -
0		WAVE	1	x r	7 -			-29		MAVE	3	- 2 3	- 2	-	-21	-5				H	S	-	-	28.8				I	5	= :	2	σ.
RCE		SINE			•	•		147		SINE	>	123	136	147	166	791		F11		SPEED	7	7 5	- :	24		F11		SPEED	5	+ 0		37
AIHFORCE			=	1244	707-	-17	1203	-261			٥	-244	-226	-503	-207	-217		A V E		3	1.5	oc c		25		* A V E			1.5	~ -		9
0115		-	2	200	2.0	- 7		21		-	30	20	20	6-	00 0	<u>^</u>	SZ	SINE		>	5 4	57	2 -	156	S	SINE	2		5.4	e a	4	1 8
176	S		20	20	2.5	-	23	52	2		20	20	7.1	7.	21	77	DEVIATIONS			>	1.7	33	1 7 7	3.1	IATION			, :	17	42	4.2	÷ 5
7/18/7	MINUTE HEAN	DEFFICIENTS	ī	1.4.	126.5	130.7	133.8	118.5	MEAN	CIENTS	Ξ	1.4.1	119.8	123.2	1.971	9.171	ANDARD DE			Ξ,	0.7			27.6	STANDARD DEVIATION	ın	1		0.	1.2.1	13.8	6.61
VAD	ONE MI	COEFFI	SPEFD		229	210	247	275	CUMULATIVE	COEFFICIENT	SPEEU	250	241	231	241	14.7	5.1	DEFFICIENT		27.6.0	/~	20	, ;	œ		FFICIENT	9	, ,	17	27	3.5	3.6
1 CT	0	FUUNIER		11	22	11	36	3.5	0	OUMIER	*	17	25	7.5	0 0	. ,	MINUTE	COEFF			- :	0 7	*	5 3	UMULATIVE	COEFF	*			2 =	1.5	1.7
IN GH		100	>	101	133	133	181	-		100	>	101	-	171	33		ONE	UURIEN	3			- 1	7.5	115	COMOL	OURIER	>	-	7 3	3.5	5.5	6.4
TIME			5	-226	-179	-157	-181	-213			>	-226	-204	1 0 1	-192			4	3			3.7	6-	3.1		ŭ.	0	23	3.0	4	9.9	33
07154		-	¥.	9	53	129.7	3.8	52		-	ī	116.8	22.		28.				7		4 (2		3	11.5		-	Ξ	12.1			13.9	13.4
VAD			SPEED	0.67	197	434	304	335			SPEED	067	9/7	233	784				0336	1	- 2	1.7	35	30			64.0	67	57	5.7	36	-
		+CAKS		7.5						PEAKS	ŧ	1.5	200	7	10			FEAK S	*	7.7	2.1	11	5 1	10		F. A.K. S.	3 SPE	4.5		3.3		
			>	146	101	150	135	137			>	671	7 9	- 0	-				,	5.5	00	3.0	æ	0			7	7.7	9.5	7	0.9	0
# E			0	+52-	5.7.	-130	- 503	8 6 2 .			0	1671	-212	-203	-220				3	4.0	2.0	3.1	6.1	7				9.5	5.0	5.3	0 .	25
HEIGHT			212	-	,	~	7 (LO.			E .			3 -)			1111	1	7	3	<i>y</i> ,	n			и [1	114	2	77 3		
															200	-																

3:55: 0	0:0:			SP	21	6 1	16	61	54			SP	21	20	61	61	21																		
START TIME	TIME			ĭ	121.7	132.2	126.1	**0*	142.5			Ŧ	121.7	126.9	126.6	129.9	132.7																		
0. STA	END		11.	SPEED	162	288	264	337	346		F17	SPEED		583							_	0		8.7	.3					r	6.	6.	9.	11.3	
40 9C			WAVE FIT	3	-27	-24	-17	-31	-28		* A VE	3	-27	-26	-22	-24	- 25				Ŧ	_	_			_									
ند			SINE	>	150	189	951	259	•		SINE	>	150	169	101	187	502			F 1.1	SPEED	1	2.1	-	32	53			111	SPEED	30	30	67	4 4	•
AIRFORCE				0	-243	-209	607-	-213	-203			2	-243	-126	-220	-218	-215			YAVE	3	. 4	oc.	00	0	=			E A VE	¢	4	1	x (00	
0715 A			-		23						-	2	23		50	6	- 10		45	SINE	^	. 3	1 7	4.4	33	65		5	SINE	>	5.2	6.0	47	0.9	0
				20	26	2.0	15	23	1.8			2.0	24	2 .	50	21	20		DEVIATIONS		-		7 3	13	3.6	10		1 A T 1 ON		0	43	7	37	36	7
9/18/76		ONE MINUTE MEANS	ENTS	1	121.9	129.7	173.5	136.8	140.6	E MEANS	1ENTS	1		1 25. 1	125.0	127.8	130.6		ANDARD DEV	1 5	1			7.5	7.9	14.5		STANDARD DEVIATIONS	1 51	I	11.4	11.3	6.6	10.6	17.5
VAU		NE MINUT	COEFFICIENTS		244				538	CUMULATIVE MEANS	COEFFICIENTS	- 2	STEED	1	237	0 :: 0	250		5	DEFFICIENT		2		o .c				VE STAN	COEFFICIENT	SPE				3.5	
1 01		0	OURTER	3				. 4	3.7	00	OURIER		2		20		25		E MINUTE	O		3	-	- *	7	7		CUMULATIVE	~	ž	-	12	0.1	13	_
IN GH			100	,			50	200	224		104		>	125	134	2	163		ONE	OURIER		>	7	3,	7	215		200	FOURTE	>	7	7	3.7	6 5	5,
TIME					000		*	000	181				>	-203	7		1 8 9 1					0	37	32	- 6	. + 9				2	11	35	28	28	3.7
01154			-			115.1	130.5	2001	138.1		-		I	115.7	123.1	121.4	125.5			-		I	13.9	17.3	1.01	0.6			-	ī	~	4	5.3	15.9	13.6
047					0.344				x & x x x x x x x x x x x x x x x x x x				SPEEU	303	667	687	104							5 .						1 4 4 4 7	,			3.4	
			EAK S		2	o- cc	9 9	5	7.7		5 4 6 5			6 4	10	+ 9	67			PEAKS		2 2	3.5	24	50	75			PEAKS	,	,	33	7.0	3.5	3.3
			34		>	172		130	127		1		>	~	154	145	172					,	45	67	7.0	2 4	2					0 0	2 4	75	7.8
	1 43				5	-250	+17-	-233	-231				- 17	-266	-240	-239	-236					ם	14	0.0	2.7	200						4		5.3	- u
	t£ 1500				2				T IN				214	-	7	3	* 1	n.				11111		7	m,	÷ 0	n					-	4 "	, ,	ru.

0::5																															
*			0	7	3.0	•	7	2	30			SP	7,7	56	2	23	5,														
END TIME			_	121.6	130.0		128.9	122.0	114.5			ī	121.6	131.5	130.6	128.3	126.1														
E N	<u>-</u>	22.00	SPEED	287	303		306	320	316		<u>-</u>	SPEED	287	296	568	305	307														
	WAVE FIT	,	2	-22	70	,	-	-19	-21		WAVE FIT		-22	-23	-21	-20	-53			ī	16.9	15.5	10.7	73.5			ĭ	16.9	18.2	15.9	
	SINE	>		8 + -	222	7	0 .	168	128		SINE	>	148	8	189	183	-		- 1 -	SPEEU	35	54	12	. e	:	111	SPEED	35	50	52	
			0	-233	-102	7	-534	-267	-266			>	-233	-211	-218	-231	-237		MAVE		23	-	3 0 (- 10	2	HAVE		23	- 8	9 -	
	-	,	30	6 1	0		9	4	23		-	30	1 9	13	T	7 -	91	S	SINE	>	82	34	7	122	7	SINE	>	2 8	10	29	
s			70	8 7	00	07	<u>.</u>	70	6 1			20	18	70	6	50	<u>-</u>	DEVIATIONS		כ	33	7.3	31	7 7	DEVIATIONS		ם	33	09	53	
ONE HINUTE MEANS	IENTS	:	-	119.1	1 34.4		128.3	119.8	112.8	E MEANS	IENTS	H	0	00	0	126.1	~	0	2	H	14.7	1001	8.2	0.1	ARD DEV	S	Ŧ	14.7	17.3	z . ,	
4E M140	COEFFICIENT		SPEED	246	3.11	107	597	283	273	CUMULATIVE	OURIER COEFFICIENT	SPEEU	246	254	257	564	266	TE STANDAR	COEFFICIENT	SPEEU	3.9	14	52	5 5	S		SPLEU	3.3	4.2	37	
0	œ			52		-	>	717	27	000	IER (25	28	25	54	52	HINUTE	COEF		52	-	œ	22	,	COEF		25	6	17	
	FOURIE		>	120		6/1	191	- + -	110		FOUR	>	120	151	155	151	*	ONE	FOURTER	>	59	35	2.3	رن د د د	CUMULATIVE	URIER	>	6.9	5.7	t T	
			0	-206			907-	-240	-239			>	-206	-193	-197	-208	-213		1	o	31	10	3.8	7 4	à.	F 0)	31	5.5	20	
	-								130.5		-	ī		30.7	26.9	25.7			-	H	9.9	9.3	11.2	12.2	2	:	Ξ	6.6	7.3	101	
									375			SPEED		297	667	307	310			ELD	38	11	61	2 7	,		SPEED	38	27	25	
	PEAKS		*	74	3,4	0	7 (*	5.6		PEAKS	ŧ	14	6.9	4.5	65	2.5		PEAKS	2.5	* 5	• -	•	53	, ,	PEAKS	5	,	3.2	34	
•			>	193	. 0	7.1	7	173	503			,	193	1 + 2	1/1	176	0.8			,	4.5	34	4.7	8 3	3		,	24	3.6	5	
			5	-227		577-	-261	-271	-240			D	-111	-122	-235	-544	***			ס	30	3.2	7	T 1	'n		ס	30	30	3.7	
2			2	-		,	٦	7	S			z T	-	2	٣	<i>y</i>	-5	2		2		~	7	* s			i.	-	7	3	

### PEANS PEANS 1	
PERMS PE	
PERAS PERAS PERAS PERAS 1 FOUNTER COEFFICIENTS 1 SINE MAVE FIT 222 244 HI 333 137-H - 202 174 25 271 131-2 23 13 -236 279 -27 33 244 HI 333 137-H - 202 174 25 271 131-2 23 13 -236 279 -27 33 245 244 HI 333 137-H - 202 174 25 271 131-2 23 13 -236 279 -27 33 247 169 59 342 145-1 - 179 205 174 25 24 127 2 10 19 -264 310 248 244 HI 333 137-H - 202 174 25 271 131-2 23 13 -236 279 -27 33 249 244 HI 333 137-H - 202 174 25 271 131-2 23 13 -236 279 -27 33 240 247 HI 343 137-H - 202 174 25 271 131-2 23 13 -236 279 -27 33 240 247 HI 343 137-H - 176 177 27 20 127-2 13 -236 279 -27 33 240 247 HI 343 137-H - 176 177 27 20 131-2 23 13 -236 279 -27 33 241 248 HI 343 137-H - 176 177 27 20 131-2 23 13 -236 279 -176 32 241 249 249 13 27 111-4 -176 177 27 13 13 -236 279 -176 32 242 249 HI 343 137-H - 176 177 27 127 13 -2 20 15 -27 20 176 170 243 249 13 27 111-4 -176 177 27 127 13 -2 20 15 -27 20 176 170 244 24 24 17 17 17 17 17 17 17 17 17 17 17 17 17	
PEAKS 1 FOUNIER COEFFICIENTS 1 SINE MAVE 1 V W SPEED TH 2 V W SPEED TH 3 137-18 - 202 174 25 274 113.2 23 13 - 236 279 - 23 2 V V W SPEED TH 3 137-18 - 202 174 25 274 113.2 23 13 - 236 279 - 23 2 V V W SPEED TH 2 V W SPEED TH 3 V W SPEED TH 4 V W SPEED TH 5 V W W SPEED TH 6 V W W SPEED TH 6 V W W SPEED TH 7 V W SPEED TH 7 V W	
PEANS 1 FOURTER COEFFICIENTS 1 SINE NEED 144 OU V W SPEED 174 OU V V V V V SPEED 174 OU V V V V V V V V V V V V V V V V V V	9 -
PEANS PEANS PEANS 1 FOURIER COEFFICIENTS 1 COURIER COEFFICIENTS 1 1 2 24 4 11 313 137.8 -202 174 2 25 11 131.2 23 13 -236 222 244 41 333 137.8 -202 174 2 25 271 131.2 23 13 -236 234 234 122.7 -241 145.1 -149 205 15 271 131.2 25 15 -175 244 41 323 137.8 -202 174 2 2 24 122.7 16 19 -264 245 213 58 348 129.2 -231 155 27 280 124.0 20 18 -263 247 41 333 137.8 -202 174 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	35
PEANS 1 FOUNTIER COEFFICIENTS 222 244 H1 333 137-8 - 202 174 25 271 131-2 23 224 244 H1 333 137-8 - 202 174 25 271 131-2 23 225 244 H1 333 137-8 - 202 174 25 271 131-2 23 227 244 H1 333 137-8 - 202 174 25 271 131-2 23 227 244 H1 333 137-8 - 202 174 27 20 20 227 244 H1 333 137-8 - 202 174 27 20 20 227 244 H1 333 137-8 - 202 174 27 20 20 227 244 H1 333 137-8 - 202 174 27 20 20 228 244 H1 333 137-8 - 202 174 27 20 20 229 244 H1 333 137-8 - 202 174 27 20 20 230 244 H1 333 137-8 - 202 174 27 20 20 231 245 50 332 133-3 - 203 164 27 170-2 231 245 50 332 133-3 - 203 164 27 120-2 231 245 50 332 133-3 - 203 164 27 120-2 232 244 H1 33 133-3 - 203 164 27 120-2 233 244 H1 33 13-6 - 202 174 20 20 244 22 34 127-2 - 231 155 27 130-7 25 24 H1 32 14-14 - 176 197 20 27 130-7 26 24 127-2 20 20 27 24 H1 32 14-14 - 176 197 20 27 130-7 28 24 H1 33 13-3 - 203 164 17 120-2 29 27 120-2 20 20 24 120-	
PEAKS U V W SPEED TH U SPEED TH U N W SPEED TH U N N N SPEED TH TH TH TH TH TH TH TH TH T	58
PEAKS U V W SPEED TH U SPEED TH U N W SPEED TH U N N N SPEED TH TH TH TH TH TH TH TH TH T	18
PEARS 1 FOURIER CO 22 244 H1 333 137.8 -202 174 25 225 237 14 31 127.8 -202 174 25 226 237 14 321 127.7 -240 151 12 227 237 14 321 127.7 -240 151 12 228 237 51 341 127.4 -217 141 22 229 244 H1 333 137.8 -202 174 25 230 244 H1 333 137.8 -202 174 25 231 224 244 H1 333 137.8 -202 174 25 231 224 244 H1 333 137.8 -203 164 19 232 244 H1 332 133.4 -209 165 21 233 224 225 336 132.4 -209 165 21 234 224 236 132.4 -209 165 21 235 264 17 12 14.1 32 47 16 24 2 36 16.1 32 47 26 25 26 27 26 26 17 12 25 31 12.4 25 20 27 26 27 31 12.4 25 20 28 27 31 12.4 25 31 12.4 25 20 28 28 28 28 28 20 29 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	2.91
FEAKS 1 FOURIER 12.2 244 18 333 137.8 -202 178 25 25.2 239 18 333 137.8 -202 178 25 25.2 207 51 341 128.4 -217 143 22 25.2 204 51 341 128.4 -217 143 22 25.2 204 51 341 128.4 -217 143 22 25.2 204 51 342 122.7 -240 151 14 27.2 244 48 32 137.8 -202 178 25 27.2 244 49 32 137.8 -202 178 25 27.2 244 49 32 137.8 -203 164 21 27.2 244 49 32 131.4 -176 192 20 27.3 244 49 32 131.4 -176 192 20 27.4 49 32 133.3 -203 164 21 27.5 21 49 132 131.4 -209 165 21 27.6 47 32 26.7 95 75 21 28.6 47 32 26.7 95 75 21 29.6 47 32 26.7 95 75 20 29.7 42 38 7.1 32 31 7.1 600 118 C06 20.0 4 42 34 7.1 32 31 7.1 600 118 C06 20.0 4 42 34 7.1 32 31 7.1 32 31 7.1 33 31 7.1 3	0 1
PEANS U V W SPEED TH U V W SPEED TH U V W SPEED TH U V Z22 Z44 H1 333 137.6 -202 178 2554 207 213 137.6 -202 178 2554 207 213 137.6 -202 178 20554 207 213 56 346 129.2 -231 155 210 22 244 H1 343 137.6 -202 178 22 244 H1 343 137.6 -202 178 23 244 H1 343 137.6 -202 178 24 49 332 136.6 -171 176 25 336 132.4 -209 165 26 42 33 132.4 -209 165 27 42 38 7.1 32 49 28 47 36 18.1 32.4 25 29 29 68 47 36 18.1 32.4 25 29 20 7.1 56 25 31 12.4 25 20 20 7.1 66 25 20 20 7.1 66 25 20 20 7.1 66 25 20 20 7.1 66 25 20 20 7.1 66 25 20 20 7.1 66 20	9 -
PEANS U V W SPEED TH U V W SPEED TH 222 244 81 333 137.8 -202 2559 207 259 207 259 207 259 207 250 213 259 207 250 270 270 270 270 270 270 270 270 270 27	57
PEANS 222 244 81 333 137.8 172 239 18 321 145.1 254 201 51 341 128.4 255 201 51 341 128.4 255 202 244 81 333 137.8 197 252 244 81 333 137.8 197 252 244 81 333 137.8 197 253 244 81 333 137.8 197 254 49 327 14.4 27 28 29 29 29 20 24 24 25 31 12.4 26 29 20 20 20 20 20 20 20 20 20 20 20 20 20	7.3
222 244 81 3 255 244 81 3 255 244 81 3 255 207 239 244 3 256 207 231 3 257 244 81 3 257 244 81 3 250 3 2	0 - H
222 244 811 255 425 811 255 424 811 255 425 811 255 811 255 811 255 811 255 811 255 811 255 811 255 811 255 811 25	* 1
222 232 232 232 232 232 232 232 232 232	
23352 2352 2575 2575 2575 2575 2575 2575	7 1
Z-N910 Z-N910 Z-N910 Z-	00 0
Z - N - N - N - N - N - N - N - N - N -	~ ~

4:5:0		SP	33	56	30	28	52			SP	33	30	30	29															
1 1 1 1 E			131.3	136.7	132.2	126.2	127.1			ī	31.	33.	3	131.4															
START END TI	=	w	~	0	4	•	7		F.1.1	SPEED	347	327	334	341													2	•	
	MAVE FIT	3	-26	- 15	-20	-26	-23		WAVE	*	-26	-21	-20	-22				ī	19.	15.1		2.6			ī	19.6	17.2	13.	
	SINE	>	215	214	233	215	208		SINE	>	215	215	221	219			F11	SPEEU	21	39	3.8	34		F 1.1	SPEEU	57	52	10	ž ;
		ח	-249	-203	-248	-277	-269			>	-249	-228	-234	947-			MAVE	*	22	7 -		=		WAVE	3	2.2	<u>a</u>	0 .	0 1
	-	30	11	13	7	11	13		-	30	-	1.2	13	7 7		S	SINE	>	12	0 1	67	4 3	ş	SINE	>	12	0.9	4 0	71
MEANS		20	23	54	4	9 -	50			20	7.3	23	2.1	20	2	VIATIONS		כ	901	7.3	280	20	1 1 0		5	106	42	90	12
MINUTE MEANS	1ENTS	Ξ	127.4	7	129.2	10	125.1	E MEANS	IENTS	ī	127.4	130.0	129.8	128.3		ANDARD DE	1 5 1	ī	20.8	17.6	0 0	0.9	STANDARD DEVIATIONS	1 5 1	ī	0	18.8		•
04E 4150	CUEFFICIENTS	- 1		25.6	101	316	301	CUMULATIVE	COEFFICIENT	SPEEU	-	280	287	295		5	COEFFICIENT	SPEED	9	41	5 2			FICIENT	SPEED		1,	20	8 .
6	OURIER C	3		6	27	2.8	30	5	OURIER O			52	25	26		MINUTE			22	5	24		JHULATIVE	COFF			0	-	20
	100	>	165				171		FOU	>	145	191	173	175		ONE	OURIER	>	25	32	6 / 3	5 7	CORC	OURIER	>	25	24	53	69
		=	-236	4	-224	676-	-245			n	-214	-212	-216	-225				5	101	A 1) 3		•	5	101	63	19	11
	-		27.9	, , ,		27.2	121.0		-	1	27.	. 6	36.	134.2			-	ī	10.4	74.0	36.6	1.0.1		Ξ	ī	10.4		24.1	21.12
		3 4 4 3	3.55	111	, ,	040	155			SPEE	4	335	338	7 7 7				SPEEU	2.5	6.		31			PEEU		100	5.0	,n
	PEAKS		-		0 0		7.4		P. E. A.F. S		7.1	*	5.5	τ.			PEAKS	*	2 18	3.1	9 -	3.7		PEAKS		Œ	23	T)	3.4
. 4.		3		2002	503	707	191			>	410	711	524	222					11	6.5	7.0	0.0				11	6.4	9 9	- 0
			- 24 4	1111	11.7	0 0 0	-235			5	3 6	7 17	-218	-236				-	36	6.5	961	3.1			-	4	9.0	177	103
100		-		* (7	2				2 E		- 2		т. Т	n _ = =	.4		1111		7	m :	r un			E		. 7	3	3

	0																																						
	4: 5:				SP	52	2.1	54	23	22				SP	25	23	54	23	23																				
	START TIME				ī	123.4	129.4	134.3	130.2	127.2				H	123.4	26	53	129.5	29																				
.06			F17		SPEED	38	34	36	38	37		11.		SPEED	380	364	364	369	370																				
0 1			WAVE FIT		3	- 28	-17	-17	-27	-20		WAVE FIT		3	-28	-23	-21	-22	77-				1		7	7.5	7.7	10.3					1		2.5	6.0	0.6		
RCE			SINE	3	> 1	503	215	157	748	225		SINE		>	508	212	227	232	0 6 7			-	SPEFD	1 10	22	23	27	7			:		113345	, ,	25	7.	35	,	5
AIMFORCE					9	5 - 7 -	- 592	-258	-293	-293				>	3.1	53	-278	-282				2 2 2			17	50	90	Ξ				4 A A 4			2	œ c			0
0115			-	5	2 (0 .	5	15	6	55		-		30	50	20	2 .	_ =		10		31.15	>	47	42	27	26	63		í	1		>		7	t t	7 0	, ,	F
170		5 2		2	3 .		0	97	17	52				7	3.	97	97	24		DEVIATIONS			0	4	9.5	7	30	7 7		IATIONS			0	. 11	- :	5 - 2	1.7		0
9/18/7	1	MINUTE MEANS	CIENTS	Ξ	120.4	127.	1.77	0.001	128.3	r•631	CUMULATIVE MEANS	CIENTS	2		1.24.	1	124.0	126.0		STANDARD DE	5		ĭ	7.4	9.0	0.9	4.9	N . 1		STANDARD DEVIATIONS			ī	7.4			1.1	7.9	
VAU		H 3.00	COEFFICIENTS	SPEFO		290	200	067	320		HULATIV	COEFFIC	0 2 3 0 5		8 2 2	201	200	248			FFICIENT		PE	25	3.1	54	71	1 2			1CIE wTS		PEED	14		36	3.6	1.5	
11 CT		0	FOURTER	7	-	2.3	2 0	00			5	8 3 1			2 0	3.4	27	25		31011	COEFF		3	54	17	α_	<u>*</u>	91		CUMULATIVE	COEFFICIE		5	24	20	0	7	1.7	
ME IN GH			0 4	>	151	173	- d	100	1 7 1			FOUR	>	J	16.	4	-	173		OME	BURIER		>	5.1	20	=	53	7		CUMUL	PURIER		>	5 3	1.4	33	35	34	
1.				n	-253	-228	17.	-254	-242				۵	-243	-240	-232	-237	-238			•		5	21	2.	3.0	30				L		0	15	20	0	43	6.5	
65110			-	ī	117.0	127.1	132.0	1 10 3	136.9			-	I	7.0		1.0	8.8	0.0			1.		I	0	15.6			0.75					: ·	0.00	13.2	12.7	12.3	10.5	
VAD				SPLEU	343	362	317	+02	3.45				SPEEU		377								.1	0.0	9.3	0 9	9 7	2					54.0	7	•	,		1	
			F 2 4 5	×	7 11	5.1	1 4	15	•			PEAKS	•	1.4	+ 9	20	5.0	2.5			E A K S		345	7,	7 7	-	. ,				PEARS		÷5.	7+	3.5	0.5	33	3.7	
-				>	173	017	647	957	243				>	173	7.6.1	517	577	677			3		, ;	1.0	44	4	103				ī			11	7.1	10		12	
				o	7 7 7 1	082-	-176	-301	552-				0	+56-	-317	1567	-555	# T 7 -					0 0		1 2	5 3	177						2	,	9	6.9		0	
HE 1 GH 1				z I u	_	7	~	7	,r				212		7		J .	n	55			7		- 0	. 6	,	s								7	~ .		5	

4:15: 0			SP	32	54	2 P	28	61					SP	32	29	28	88	5.6																				
START TIME END TIME			I	127.6	145.5	135.3	122.9	124.4					Ŧ	127.6	135.9	135.7	132.8	131.0																				
STAF			SPEED								111		SPEED	353	338	320	312	300						-	-		•	*					0	0	7	_	7	
чо 90.		WAVE FIT	3	- 25	61-	-13	-20	-17			WAVE		3	- 25	-22	61-	6	- 1-					I	30.0	14.	10.	52.	13.				H	30.	9.4	20.7	22.	50.	
		SINE	>	807	259	203	148	139			SINE		>	208	231	221	205	161				F11	SPEEU	45	11	38	20	23			F.1.4	SPEEU	45	4	7	43	45	
AIRFORCE			כ	544	-174	161-	-212	-207					0	- 244		-207	900	-208				WAVE	3	24	0		2.1	2			F A CE	3	24	· -	- 1	40	9	
0715 A1		-			. 0						٠	•	30	0		17		17		18		SINE	>	4 7	4	5.2				57	31146	>	146		95	102	6	
			20	20	240		3 4 6	•	:				20		0,0	23	77	57	2	VIATIO			7	, ,		1 3	7	- 1	?	DEVIATIONS		5	11	: :	v 4	5.3	2.5	;
9/18/76	E MEANS	ENTS	ī	24.7	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		200	123.2		MEANS	34114	1 E N 1 3	ī		1.07	135.6	0 • 1 5 1	132.0		ANDARD DEVIATIONS		5 1	1	34.11	0.07		3.1.4	12.7	:		1 51,1	ī	24.	0.67			0 3	
VAD	ONE MINUTE	COEFFICIENT		2 2 2	100					CUMULATIVE		COEFFICIENT	0.000	-	304	567	710	269	767	7.		FFICIENT	3	0						VE STANDARU	101	Spre	,		2.5			
5	0	OURIER C	-		3.0	12	-		-	5		004154	7		30	28	52	25	5	MINUTE		4 COE	7		5.0		0	0.7		CUMULATIVE	R COEFF		: (0-0			-
Σ 2		100	:	>	182	554	591	G .	<u> </u>			104	,	>	185	202	687	178	591	ONE	,	FOURTE		>	101	'n	35	60	9	Ĵ	FOURTER	,		0	÷		6/	
1 3 4				>	-221	-153	-173	061-	961-					0	-221	-189	-184	-195	181-					0	9.2	19	53	28	3				>	ec ec	9.0	9 1	2.5	0.0
+5110		-			141.7		45.4		43.0			-			41.7		45.7	39,3				-		ı	30.8	23.6	15.4	35.7	36.0		-		ī	30.8	25.6	22.8	26.3	28.0
440				SPEED	36.4	326	767	067	£					SPEEU	369	349	329	320	303					9	53	57	3 9	22	34				SPEED		1.4			
		2,085			8.3	,	7	e.	0			PEARS			83	11	46	713	63			PEAKS		S .	7.1	23	62	2 3	35		PEARS		•	2	2.4	7	2	
		2		>	1+7	157	1,77	, ,	172			1		>	141	647	04/	577	717					•	£	11	5.5	160	£				•	7	11	00	æ	-
- 7				5	-220	-173	-1172	+ x -	÷					0	-2211	961-	*		621-					7	111		14	6.5	150				0					
191				: 1				, ,						214				, ,		.56				7.14	-	`		, ,	an and				ž	-		1	7	r.C.

0	0																																	
01:4	4:15:		SP	~	54	22	23	12			SP	2.8	26	25	24	54																		
RT TIME	H.		ī	131.8	136.9	141.7	131.3	126.9			ī	131.8	34.	136.8	35.	33.																		
START	END	-	SPEED	38	344	296	305	288		F17	SPEED		361	341	331	323																		
H0 90		WAVE FIT	¥	-31	-21	-22	-21	-17		MAVE F		=	-26	-24	-23	-22				1		8.7	5.0	18.6	5.1				ī	7.8	0.5	8.9	13.1	1.6
CE		SINE	>	255	546	231	189	171		SINE	>	255	250	544	229	218			F 1.1	SPEFD		3.5	22	7	de C			111	SPEED	52	4 2	30	20	5
AINFORCE			٥	-283	-229	-185	-219	-229)	-283	-254	-231	-228	-228			WAVE	3	:		7	13	•			AVE	ì	ď	10	0	0.1	10
0115			30	13	1 6	1.6	2.4	27		_	30	13	15	15	1.1	6		5110	SINE	>		7 0	8 -	A 5	25		s	SINE	>	4.2	4	4 2	0.4	09
3/76	2 14 5		20	70	28	54	35	17	5		20	20	54	4.7	17	52		DEVIATIONS	_	3	, ;	9 3	28	7.1	33		VIAII	_	כ	36	5.4	5.7	09	2.6
9/18/7	MINUTE MEANS	CIENTS	ī	130.0	134.4	136.5	130.7	125.7	CUMULATIVE MEANS	FFICIENTS	I	30	132.4	33	132.9	131.5		STANDARD D	2	ī	0			13.6	•	i	STAYDARD DEVIATIONS	. 2	ī	5.9		1.6	10.7	10.7
V A D	ONE 41.	COEFFICIENTS	SPEED	310	276	230	230	217	MULATI	COEFFI	SPEED	310	202	272	261	253			DEFFICIENTS	SPFFD	,		3.6	6 1	2			COEFFICIENT	SPEED	15	40	6.5	9 +	1+
64T CT	0	91 HOO	7	34	1 9	50	5 -	7	0.0	UR1ER		36	27	52	22	-		E MINUTE	R COEF	7	4	0	13	7	un.		COMOLALIVE	œ	,	4	=	1.2	1.2	13
9 N I 3 W			>	102	188	167	7 + 5	125		0 4	>	201	194	185	174	165		ONE	FOURTE	>		- d	32	37	-	,		FOURTE	>	5	5.1	4 7	1 Q	1 5
F			0	-234	061-	-157	-170	-175			ס	-234	-210	-193	-187	-185				0	-		2.7	7					2	31	9 5	ac a	4.1	7
01154		-	ī	134.2	135.3	152.0	162.4	130.9		-	ī	134.2	135.1	1.01	1 . 9 . 1	143.5			-	ī	5	7.1	•	37.3	7.5			-	Ξ	11.5	==	13.2	23.5	22.7
CAN			SPEED	387	345	305	304	317			SPEED	185	364	***	333	30				PEED		7	30	38	•				SPEED	5.4	4.6	5.1	20	25
		PEARS		4.3	44	##	15	6.9		PEAKS	٠	63	65	5.5	5.2	5.7			PEARS	s 5P	~	-	50	15				PEAKS		3.4	3.2	34	3.7	33
:			>	191	***	747	131	907			,	997	457	157	152	7.17					1.1	5.5	17	47	•					19	9.9	5.2	25	2.2
-			5	197-	-235	(+)-	-85	-237			n	-201	-251	-216	161-	161-				7	15	5.3	75	180	ī				5	5.1	5.3	7.3	123	111
и£ 1 GH 1			z z	-	7	٩	*	'n			MIN	-	,	3		un 3 - 9	57			111		7	2	7 1	r				<u>.</u>		7	•	*	an .

SINE W 12 147 12 147 13 149 14 153 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 1		
HD 90. START TI END TIME INL MAVE FIT V M SPEED TH SB0 123.7 B0 -21 369 123.7 B0 -20 301 129.0 V W SPEED TH		
HD 90. INL MAVE FIT V W SPEE 147 -19 28 140 -21 36 140 -21 36 140 -21 36 140 -21 36 140 -11 284 170 -13 297 181 -13 297 181 -13 297 181 -13 297 181 -13 297 181 -13 297 181 -19 299 181 -19 299 181 -19 299		
HD H		
1 N F	22.9	•
AIRFORM AND	22 22 50 50 45	
- 11111	13 12 12	
	103 93 90	
#EANS HEANS NIS NIS NIS NIS 10 10 20 20 20 20 20 20 20 20	51 37 55 53	
# P P P P P P P P P P P P P P P P P P P	28.9 17.7 19.2	
CT VAD 9 ONE HIJUTE 1 W SPEED TH 14 215 124 24 236 121 25 269 126 26 215 124 26 215 124 27 26 125 80 226 121 80 226 121 80 226 126 11 255 126 11 255 126 11 255 126 11 255 126 11 255 126 12 25 126 13 25 126 14 25 126 16 25 126 17 25 126 18 65 28 18 62 18	55 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
OUNTER CONTIER SPEED	00	
IN GF FOUNT ONE 125 125 125 125 125 125 125 125 125 125	2 2 2 2 2	
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 2 3 5 2 5 3 5 5 5 5 5 5 5 5 5 5 5 5 5	
1154 141 14 141 14	90	
286 286 286 286 286 286 286 286 286 286	35	
A A K S S S S S S S S S S S S S S S S S	23,5	
	0000	
168H = 157	1 0 1 v	
E = 400 to	vm + 1	

	0				9 6	200	2 - 2					SP	36	27	52	23																	
START TIME	TIME			130.3	120.5	124.7	129.3					Ξ.	29.7	29.6	0.87	128.4																	
	END	F11	CPFF		280	267	371			F17						313																	
9		WAVE	3	- 24			-25			WAVE			-24			1 9			I	4.0	2.5	8.9	8 . 8					I		6.9	2 . 7		7.0
4CE		SINE	>	196	184	152	204			SINE	,	• (, 0		. 0	195		113	SPEED	-	23	50	28	:			F.1.1	9		6 6	2,4) J	2 2
AIRFO			ם	-235	-222	-215	-282				:		567-	977-	- 240	-241		N A V F			S	9	- °				WAVE	×		_	- 2	1.5	1.5
UTIS AINFORCE		-	30	11	7	17	7 7			-				0 4		9	S	SINF	>	34	92	-	57				SINE	>	3.4	000	37	6 1	72
0			20	32	91	32	26				00	;;	33	24	26	5 4	DEVIATIONS		0	25	23	20	32		TIONS			5	25	54	23	35	34
9/18/76	ONE MINUTE MEANS	1ENTS	ī	127.3	125.5	123.6	126.2	2 4 5	CNEANS	IENTS	ī		26.3		25.7	25.7		1 8	Ŧ	5.5	1.9	9.9			STANDARU DEVIATIONS		-			2.0			
T VAD	ONE MINE	COEFFICIENT	SPEED	250	254	504	284	E E E E E E E E E E E E E E E E E E E		COEFFICIENTS	SPEED		252	237	257	292	TE STANDARD	FFICIENT	SPEED	67	22	77	21				FICIENTS	a		25	, 13	7 7	4.5
0 1 115		OURIER	3	30	54	œ i	19	5	2	OUKIER	*	30	27	21	54	23	MINUTE	COEF	3	1	r.	. 0	. ~		CUMULATIVE	3 3 0 0		8		4		-	
=		101	>	151	1+1	211	165			FOU	>	151	* 7 1	137	*	152	ONE	OURIER	>	5.1	7.7	3	: :		CUMUL	0 31 8110		>	2.1	2.7	3.)	3.4	35
1 1 ME			ח	-197	-204	0 :	-229			,	C,	-197	-201	161-	-208	-210		•	0	56	21	27	52			4		D	56	2.3	2.8	3.7	36
01154		-	ī	143.2	133.6		133.5			-	ī	43.2	138.0	31.5		30.7		-	Ξ	13.2			13.9			-		Ξ	13.2	14.3	16.0	0.+1	
VAD			SPEED	334	203	0 7	329				SPEED	334	371	304	326	327			SPEEU	5.8	, d	œ	28					EEU	5.8	33	~ +	25	r 7
		PEAKS	*	2.	40	14	31			PEAKS		15	6.5	7	7	÷.		EAKS		0 0	2.6	01	7			PEAKS		35	æ 7	÷ E	E	31	* 2
			A	167	173	176	917				,	657	7.30	146	107	107		a.			44	3.7	3.5			٩			36	25	13	0 .	
" -			200	041	-235	- 303	-236				5	-134	-507-	-211	7.7.	1.7				2 4	31	2.1	7.1					5 .	13	0	200	0	0
нЕ19н1			z -										,						 -		-	7	S.					иТи.		2 .	2 3		
														E	-	59																	

4:25: 0		SP	1.1	27	2.3		50			d S	1.7	22	23	21	21														
END TIME		ī	115.9	127.7	127.1		113.4			ĭ	6.511	122.3	123.8	120.1	118.8														
N N	<u>-</u>	SPEED	273	333	320	288	293		11	SPEED		305	310	304	302														
	WAVE FIT	*	-17	• 1 •	7 -				WAVE F	3	-17	- 18	-17	-16	-15			ī	6.3	0	20.8	7.6					2.9	12.0	0.11
	SINE	>	119	190	188	97	112		SINE	>	119	158	167	7	-		111	SPEED	3	56	53	33		F11	3 0	י נו	1 2	5.5	,
		2	-24	-25	- 23	-26	-267			>	-243	-249	-245	-251	-254		MAVE	3	00	1	1 8	0 -		N A VE	3		· -		,
	Ī	30	=	15	1.2	1.5	7		-	30	=	13	13	J	-	SNO	SINE	>	33	62	106	36	· ·	SINE	3		5 - 4	76	
SN		20	00	61	20	10	15	S		20	00	7	16	*	5	DEVIATION	_	>	28	102	68	4.5	01141	_	=	0 0	75	7.7	
UNE MINUTE MEANS	CIENTS	Ξ	:				109.4	E MEANS	LIENTS	ī	114.2	119.4	121.0	117.1	115.7	STANDARD D	S	ĭ	4.9	21.1	20.5	10.9	STALBARU DEVIATION	S	1	7		17.2	
NE HIL	COEFFICIENT	SPEED	259	295	281	266	267	CUMULATIVE	COEFFICIENT	SPEEU	259	279	219	276	17		FFICIENT	SPEED	36	63	0 7	31		-	1 1 0	2 -	2 2	10	
0	OURIER	3	20	50	5.4	5 1	141	n o	OUKIER		20	2.0	2.1	0 0	-	MINUTE	COF	3	0	æ -	<u>a</u>	- 6	CUMULATIVE	COEFF				5	
	104	>	106	147	152	76	30		104	>	106	128	136	120	:	ONE	FOURIER	>	3.1	1 I	84	2 1	0.00	00	>	. ~	. T	5.5	
		>	-534	-241	-217	-252	-248			0	-234	-238	-231	-237				3	28	0	99	43		•	7	28	7.2	00	
	-	-	T	119.5	S	0	120.2		-	1	a	114.2	~	118.3	0		-	H	11.6	12.3	15.5	10.5		-	1	4.11	13.0	*	
		SPEED	517	340	916	193	967			SPEEU	279	315	314	308				لعا	36	5.0	200	38			EEU		5	25	
	FEAKS		7 5	4	35	52	27		 FAKS		24	55	7	2 5 6	,		EARS	3.5	23	35	9 6	27		EAK S	35	23	3.1	3.3	
		> (D		183	-	7			>	8	130	1 4 1	7 6			1	>	9	7.6	n s	2 2			,	65	0.8	83	
		5 1	n	-247	*	2	.0			ם	-256	-274	- 266	- 254				D	5.5	25	0 0	25			n	24	24	545	
		2 .	-	7	~	5	S			2 1 2	-	7		r s B	-60)		27	-	7	7 3	.5			2 1		7	3	

4;20; n				3	2	3	7	. 0							.																					
3			7	7	2	2	2	0					0		× 1	•	, ,	. ~																		
START TIME END TIME			-	120.3	128.9	125.8	1.4.1	1.6.1					1	30	124.3	2 4	122.3	21.																		
	111		2276	587	344	315	297	307				-	SPFF		212	313	309	309																		
0 6 0 1	WAVE	1		71.	-21	- 8	-13	- 15				MAVE FIT	3	212	1	2	9	-16					ĭ	16.2	1 - 4	17.9	7.6				ī	14.2	7	15.2	1 .	13.1
y	SINE	>		134	213	178	121	6 + 1				SINE	>	1 30	173	175	162	091			F11		SPEED	31	62	4 7	27	2		F11	9			1 0	42	39
AINFORCE		=		167-	797-	-243	-267	-267					0	-237	-248	- 246	-251	-254			WAVE			æ	5 .	0	0 0			WAVE	3		- 2	: =	=	10
0115	-	90	, ,	2	13	=	20	9 -				-	30	0	0 00		17	17		SN	SIME		>	7.5	42	υ υ	7 -	2	S	SIME	>	75	11	7.8	74	19
37.		20			53	71	22	20					20	117	23	22	22	22		DEVIATION			>	7	7.0	5 5	23	2	DEVIATIONS		כ	1	. 2	53	8 +	4.5
T VAD 97.1877 ONE MINUTE MEANS	COEFFICIENTS	ī			0	123.2	~	•		CUMULATIVE MEANS	214312.32303		ĭ	119.1	122.2	122.6	120.1	119.4		STANDARD DE	1 5 1		I	12.0	-01	0.41	2.5				H	12.0	11.3	13.9	13.4	12.1
VAD WE HID	COEFFI	SPFFD	400		267	197	546	256		TULATI	. 3.20	1 1 1 20 -	w	7		1	242	4			FFICIENT		1	33	7 1	7	5 S	,	CUMULATIVE STANDARD	FFICIENTS	3	33	9	40	3.7	36
U	FOURTER		-	2 .	,	5 4	15	6 1		0	a			13	20	7	0	-		MINUTE	COEFF			0 1	n -		c =		ATIVE	COEFF	3	6	1.4	13	1.2	1.2
IN 641	FOUR	>			00	1 + 1	63	112			31 3110		>	111	140	7	130	124		ONE	OURIER		>	œ :	60	0 6	5 -		CUMUL	91 HOO	>	4 0	5.6	6.3	(19	5.5
7 2 2		5	-208		077	117-	-754	-228					כ	-208	-217	-215	-218	-220			•			ري د -	- 3		3.6			4	٥	35	4.2	7 4 5	38	37
01154	-	ĭ	120.3			127.5	137.0	110.9			-	•	ī	120.3	121.7	123.7	126.8	123.8			-				17.7					-	1.11	3.6	12.4	14.1	25.9	54.4
Q 4 >		-	289		0	V:	7						SPEED	647	320	323	317	314				-	, ,	35	0 0		28				ELD	35	5.9	2.6	5.2	5
	PEAK S			1		0 7	7 (3.6			PEAKS			3+	£.00	6 #	4.5	2 2			EAKS	3	,	C - J	7 7	4	22			EAKS	¥ 5F	35	1.7	4.3	,	7
;		>	*	a	0 0	741	-	3					>	***	0	-	167	5			1	3	2	o u	13	3	1			•	>	94	29	7.1	13	1
" -		D	-246			167	- 1	~					7	942-	36	54	-236	7				=	3	0 4	0 00	100	50				D	38	7.1	* 4	711	701
25 I 3H		Z E	-	2	. "	7 3		'n					21 2	-	7	~	В	n -6	1			21 14	-		. ~	7	J				z I u	-	2	*)	7	n

4:25: 0		9		0.7	20	1.8	21	60 —			SP	00	20	6-	20	6-																
START TIME END TIME		1		0.811	111.3	120.6	123.6	122.8			Ŧ	-		-	118.3																	
	111	0 3 3 6 5			306	351	341	377		=	SPEED	314		323	328	337																
0 6	WAVE	3		7.	-15	-25	-25	51-		WAVE FIT	3	- 21	-17	6 - 1 -	-20	6-			ī	7.4	0.6	5.6	4.8	3.1			Ī	7.4		8.1	1.9	7 . 4
ic.	SINE	>	771		=	176	101	504		SINE	>	- 45	129	1 45	155	591		F 1.1	SPEED		36	30	22	26		F 1 T	SPEED		3 - 6	35	33	37
AIHFORCE		=	- 175	6/7-	187-	-299	587-	-3-5			כ	27	17	28	-284	5.5		WAVE	3	0	7	9	٥	ν.		X A V E	3	6	0	0	6	Œ
0115	-	90	-		7.1	2		0		-	30	4	0 00	17	15	7	540	SINE	>	33	53	38	9	27	SZ	SINE	>	33	2.00	40	4 6	47
176		20	2 .	,	5	00 -	= :		S		20	2.1		8	91	15	DEVIATIONS		٥	37	3.0	25	31	6	DEVIATIONS	-)	3.7	33	3.1	3.1	3.1
T VAD 971877 ONE HINUTE HEANS	ICLENTS	ī	113.4		10,	0 - 0	0 • 1 7 1	<u>:</u>	MEAN	IENTS	I	113.6	111.5	113.7	115.5	116.2	ANDARD DE	S	Ŧ	9.	10.1	4.7	4.3	2.1	ARD DE	5	ī	4.6	1.1	7.5	7.5	7.0
VAD E MINU	COEFFIC		7 0 7			867		338	CUMULATIVE	COEFFICIENT	PEED	-		~	867		E STAN	ICIENT	PEED	21	39	52	52	23	STANDARD	FICIENT	PEED	21	30	30	30	35
-	1 1 1				0	3.0	, ,	3	£00	1 5 8	3	2.1	4	1.2	2.3	23	HIMUT	COEFF	رم د	1.2	4	10	01	•	CUMULATIVE	COEFF	50		5	15	7 -	1.3
N 9 N	F 0 U	>	=		0	7 . 1	001	50		FOUR	>	111	101	+	124	132	ONE	UURIER	>	a	5.5	2.5	<u>τ</u>	51	CUMU	OURIER	>	13	3.5	3.5	40	640
1148		>	-256	0 0 0 0	0,7	097-	200				ס	-256	-257	-255	-256	-263		•	>	25	31	2.7	53	æ		4)	~	27	17	27	5.6
4511 0	-	I,	27		-	130 0	2 4			-	ī	~	-	2	155.5	2		-		15.0	σ.	-					ī	S	3	7	6.4	2
V C 4		9	-	31.5	715	755	200	S S S S S S S S S S S S S S S S S S S			PEED	-		N	1	7			لغا	3.0	1.5	36	23	58			0.33	3.0	3.4	33	3.4	7
	PEAKS	×		(4.0)		, r	3.5	ž		EAKS	*	7	5.1	5.1	æ	a.		EAKS	3.5	0+	6	6.1	23	71		EAK 5	55	0+	3.1	27	26	20
;		>	+ 9 1	1 3 2	1 3 1	7 0 0				2	>	0	5	0	174	TO O		1	>	7.8	6.	7.1	7.0	25		•	>	16	99	9	0.60	11
, ,		2	25	76	0	1255	1 1	-			0	V	174	rw.	-260	~			5	7.6	14	33	E of	7.0			٥	24	7 1	7.5	0 7	20
75 T 34		2 2	-		,	7 7	. 4	n			2 2	-	7	3	э В	-62			21 8	-	7	m	Ŧ.	0			m 1 %	-4	~	e :	<i>7</i> ,	c

	0	0																																			
	4:25:	30:			SP	25	21	20	28					SP	~	23	22	22																			
	ART TIME	-			1	•	119.7		138.9					ī	111.8	116.1	117.4	118.0																			
	ST	7	11		، لعا	30 0	25.3	n -	342			11		PEED	68	26	_	312																			
HO 40			MAVE F			-	- 0	7	7			MAVE		S	-		-	-13					1		6.4	6.5		27.7						12.3	0		17.6
CE			SINE	3	> C) J	179	S	N			SINE		>	101	128	7	9 9			111		9 9 9		36	32	31	5.2			-	0 9 9 9	, ,	0 :	7 3	3	- 5
AIRFOR					2 4	2 5	-305	27	22					D	56	25	, !	-259			7 V A W		3	1.2	9	Ξ	13	œ			4 4 4 4	U	,	- 0		0 0	0
0115			_		-	- α	7	13	2.5			-		30	0	<u> </u>	2 .	15		SNO	SINF		>	90	38	O #	-	20	S		21.45	>	ď	0 0	200	4.7	00
8/76		SNA		20	1	1 9 1	1 6	17	22	c c				70	17	10 a		0		EVIATIO	_		0	36	53	32	38	138	VIATION			0	17		3.7	3.7	16
9/18/		NUTE ME	CIENTS	I		10	116.5	m	m	VE MEAN		CIENTS	-	- 0	- r	vm		119.5		DARD	S		Ŧ	8.7	6.9	7.4	9.	27.0	ARD DEV			I	7.3	7	8.0	7.5	16.6
T VAD		ONE HIN	COEFF	SPEFU		270	314	267	288	UMULATIN		COEFFIC	1	J .	957	279	211	280		E STAM	ICIENT		4	2.5	3.6	47	3.2	7	STA.D	1016.10	,	PEED	25	-	5	7	7
MI C		0	04158	ž	1.7	4	2.1	α :	24	OO		HER			11	0 00	α-	5.0		MINUT	COFFF		3	1.7	α	<i>C</i>	0 :	_	LATIVE	Cuffer		5	1.7	-	- 3	<i>y</i> –	5
OF 11 6			0 4	>	8.5	1 = -	7	971	1/3			0	>	- a	201	115	1117	132		9 0 0	DURIEN		>	3.5	3.5	2 6	63	ć	CUMU	OURIER		>	3.5	6.6	5 7	2 5	5.3
- 11				7	-238	-240	-277	- 100					2	23	23	-251	5	23					0	21	50	5 -	113			4		٥	2.1	2.8	35	35	\$0
0118				ĭ	5		117.2					-	ĭ	L	7	117.1	17.	20.			1			16.8	5 4	· -	: :			-		I		~	11.2	:	,
AAD				SPEED	300	293	35.9	325					o.	300	0	316	1 8	0.2					2	17	0 ~	, -						0.4		Œ	0	0	
			FEANS		47	3.3	, ,	3.1				FEARS	8	1	3.6	0.6	7	3.3			EAKS	4	,	7 1	**	1 5	5.5			A 8. 5		345	30	5.4	6.3	6 /	r V
28.				,	571		0 10	107			2			1.25	133	143	5+	2 4			4	,		27	0.4	5.5	43			1			ī .	0.0	0 0	0 1	
# 1 H5				5	7.760	1233	-279	-230						2.5	3	-275	1	6				5		5.5	3.7	6.5	5					9 8	7 .			17	0
ME 1 G				2 .	- 1	4 7	1 1	un.					2 5	-	7	•		-63	,			H I N	-	. ~	3	7	5					*		4 1	. 3	4	
																	1.0	-0.):																		

30: 0																															
4:30		40	33	23	21	54	20			9.0	33	28	26	25	24																
START TIME END TIME		-	21.	28.	25.	127.9	26.			ī	121.4	125.1	125.1	125.8	156.1																
S T	_		340	312	337	340	342		-	4	340	326	330	332	335																
40 90.	WAVE FIT	x	- 18	-18	-26	7	-23		WAVE FIT	3	60		-21	-10	-20				I	1.01	23.2	0 .	5.0				ĭ	10.1	17.5		7 . 4
	SINE	>	175	176	195	209	502		SINE	>	175	-	182	8	0		F11	1	e L	39	3.5		50			F11	SPEEU	39	38		38
AIRFORCE		>	-285	-235	17	1	-271			=	285	2040	-264	-264	997-		NAVE		3	œ	0 .	7	v v			F V E	*	œ	7		13
0115 A	-	30	~	0	7	_	=		-		- 2					57	SINE		>	5.5	5.0 0.0		3.1	v	2	SINE	>	5.5	0.5		5.7
•		20	2.2	54	2.0	250	13			6	22	23	22	23	2.1	EVIATION)	4 6	109	63	57	MOLIAT	DEVIATIONS		Þ	4	20		69
AD 9718/76	ENTS	ī	119.2	124.9	21.9	22.11	24.6	CUMULATIVE MEANS	CIENTS	2	- 0	- 0	122.0	~	2	2	5 1		Ξ	10	22.3		o o			2	Ξ	9.8	7.9		13.5
0 A V	COEFFICIENTS	PEEU					316	ULATIVE	DEFFIC		PEEU		504			E STANDAND	FFICIENT		SPEED	0 %	5.2	2.5	1,7		STA DARD	ICIENT	4		4.7		1 7
, TO 04	2	3	23	26	24	20	29	200	1 E H			2 2	25	27	27	MINUTE	COEFF			œ	6 .	-	0 1	2 1 1	ATIVE	COFFFI	7	20		,	
114 641	FOUNTE	>	J	14	1 4	0 3	173		FOUR		> 3	,	7 7	143	155	ONE	OURIER		>	4.7	33	21)	32	2	CUMULATIVE	OURIER	>	1 7			()
ž E		מ	-263	-224	136	222	-257				0 -24.7	VI	- 246	10	5		i.)	3.8	0	35	20				0	~	7.4		
01154	-	ī	10.1	18.3	0000	7	131.2		-		I :		124.2	12	25.				Ŧ	3.5	40.0	0.	12.7				-	6.5	26.2		
0		PLED	956	202		979	347				SPEED	35.4	7 2 2	3.15	337				41	2	3.1	+	42				0.19				
	E A K S	5	* 4	4.		2.	7 0		× **			* :	T 4	5.2	2.5		5 * 4		345 %	5.2	6.5	3.5	2.5			5 V V 3	305	2	11		5.2
· a	del Ca	>	125			0.0	194		2		> 1	V	146	1 1						254	. 1	2.6	1,4			a.	,	54	2.7		117
и 14		D	- 131			11	-247				> ;	3	-257	2 2	-260				0	3.6	504	16	3.5					2	1.4.1		1 3 1
нЕ 1 5н		2			, ,	100	சம				212	-	2 "		·	64			HIN	2006	7	3	r in				2	4	- 6		

4:30: 0 :35: 0				8	1.	2.3	2.1	*				•	8 2	*	7 2	23	2																
START TIME 4:		,		-:-	21.2	26.1	29.7	27.3				2				122.3																	
STAR END	F11	2 2 0	000	7	34	343 1	99	5.8			F11		1	38	0 4	344																	
но 3 0	WAVE	3		- 15	-24	-28	- 18	91-			WAVE F	3	-15	-20	-23	-21				ī	8	5.7	9.6	4.3	9.9				I	18.0	13.4	1 2	12.1
÷.	SINE	>		150	173	661	227	217			SINE	>	120	7	9	1.82	2		F11	SPEED		52	32	7	25			F17	SPEEU	23	24	9 2	31
AINFORCE			0	- 307	- 182	- 273	-272	-281				D	-307	-294	-287	-283			WAVE			œ	=	o r	1.2			NAVE	z	7		7 -	==
0118	-		20	2.0	=	1 6	0.1	-			-	30	20	9	9	7 7	:	SNC	SINE	>	. 0	39	50	3.6	4		2	SINE	>	0	75	- 0	4 4
7.6		36	0	91	9	13	1.2	2.2				20	1.	9	1.5	7 0	-	DEVIATIONS		2	7	15	47	3.7	1.7			una.	כ	-	31	, ,	34
T VAU 971877 ONE MINUTE MEANS	STHEIL	2		103.6	117.3	122.5	127.2	125.4		CUMULATIVE MEANS	STENTS	ī	109.6	113.7	116.5	1.9.4		STANDARD DE	1 51	ī	0.	5.0	6.6	æ.	1.6		STANDARD DEVIALIONS	15 1	ī	1.4.0	10.5	0 3	10.5
VAD NE MIN	COEFFICIENT	0		304	290	291	315	300		MULATI	COEFFICIENT	SPEEU		297	295	300	000		FFICIENT	03965	J	28	33	45	36			FFICIEN	SPEED	3.2	30	2 7	
_	FOURTER	3		0	31	28	54	5 4		00	OURTER	*	6 -	52	24	24	5	MINUTE	00	2	ر. -	α	0	10	2.2		JHOLALIYE	00	ŧ	1.5	13		= =
Σ 5 Σ 1	600	3		103	134	151	190	173			100	>	103	120	130	4 7 7		ONE	DURIER	>	11	33	5 +	35	40		0000	91 HUO	>	17	2 2	F 11	25
1145		-	0	-278	-255	-244	647-	-241				=	27	26	25	-256				0	7	5.0	0.5	36	35				D	3.2	27	200	3.5
01154	-		r	116.7	125.8	127.0	134.4	124.7			-	1.1	116.7	121.6	123.3	126.3			-	7	21.9	10.01	13.6	13.4	15.8			-	1.1	21.9	5.5	17.5	15.3
, A D				357	330	335	365	368				SPEED	35	345	0+5	347	000			4		7.4	37	0+	3				4.4	52	27	2.5	35
	P. LANS		t	5.9	2.0	5	3.3	4.3			FEARS	t	5.9	90	5.5	75			PEAFS	*	2	3+	2.4	27	7 1			PEARS	-0	1.5	43	2 11	27
;		3		154	137	193	647	5.07				•	.0	-	a	861				,	111	5.0	0.9	9.2	-					127	0.6		30
			0	57	47	-263	57	0				5	57	17	27	-264				-	+5	97	4.7	0.0	t d				- 63	5.5	n -	. 43	0 X0
116 614		- 10		-	7	(F)	*	5				N 1 N		1	*	я <i>з</i> В	-6	5		2 1 2		7	9	7	ur.				4114		7 2		5

00																											
4:35		5.0	7	53	23	31				26	7	35	31	30													
START TIME END TIME		ĭ	124.3	123.0	129.2	139.3				I	124.3	123.7	125.7	128.6													
END	_	PEE	335	340	359	353				4	3	m :	J :	34.5													
	WAVE FIT	S	Ŧ,	-22	-20	-19		WAVE FI		ν •	7	-13	• •	6			Ħ	31.4	5.9	4.5	4.0			ĭ	31.4	21.5	17.2
	SINE	>	691	181	228	268		SINE		>	691	177	9 -	210		F11	SPEEU	=	2 1	2,	7 7		111	9 3 4	=	13	36
		٥	-243	-283	-275	-226				0	-243	-263	197-	-258		MAVE F		1 5	0 (2 :	- 1		Y A V E	3	1.5		,
	-	30	73	œ <u>-</u>	10	٥-		-	;	30	23	21	_ :	<u></u>	118	SINE	>	0 + 1	28	5.5	72.	:	31116	>	140	900	30
s		20	56	20	+ 1	7 2			6	07	97	23		8	DEVIATIONS		2	100	56	7 0	200	1A110N		כ	100	7.3	9
UNE HINUTE MEANS	1ENTS	Ŧ,	120.9	121.2	127.4	135.6	NATH TV-TA THEOL	IENTS	;	<u> </u>	120.9	151.1	123.4	126.0	STANDARD DE	1 5	ī	29.8	8 • 3	- 1	15.5	STANDARU DEVIATIONS	2	1	29.8	20.9	4.4
E #1 10 U	COEFFICIENTS	PEED	273	297	330	316	2.	CUEFFICIENT			273	285	302	306	E STAN	FFICIENT	9	34	3.1	23	7 0		OFFFICIENTS	SPEED	3.4	34	27
20	x	5	2	35	54	25	Ē	OURIER C		S	2	9	7	23	MINUTE	COEFF	2	1.1	1.5	÷ .	- 1	CUMULATIVE	COFFF		17	25	,
	FOURIE	>	124	151	202	228		FOUR		>	125	134	791	176	0 NE	OURTER	>	108	3.	15	7 3	СОМОГ	OURIER	>	104	7.1	1.1
		n	-210	-257	-254	-218				>	-210	-231	167-	-237		•)	91	74	a c	1 7		4	د	8 1	99	15
	-					134.1		-	,		30.5		24.7	130.1		:	н_	7.5	12.8	9:	36.8		-	Ξ	7.5	10.	H . K
		PEED				378				SPEED	555			355			EEU	6.1	23	œ :		3			0	2.1	- 1
	PEAKS	31				707		PEAKS			7.7	7	7 .	0.5		PEARS	A SPE	6	3.5	7	7 F) H		FEASS	* SPEE	6 -	4.5	1.7
•		>	477	74.1	1.61	5 4 7				,	977	507	, :	512				,	9	6	2.5				-	25	20.00
"		О	-262	2111-	308	-257				3	-597-	197-	787-	-258			D	23	9.0		207			5	17	* * *	***
15											-						2				5			2	-	7 1	*

35: 0				- (0.0								20	•	2	_																
4			SP	7	-	20	ח נ	~				SP		2	2	•	6																
START TIME END TIME			H	130.4	127.3	104.2	163.6	131.1				ī	30.	128.7	21.	21.	123.4																
			SPEED	384	343	366	356	385			-	SPEED		362	363	362	366				-	.0	•	49 1	0				7	0	ь.	- 0	
0 6 0 H			3	-21	-15	۳,		-20			WAVE F	3	- 2.1		-13	-12				11	3.	1.	20.	22.6				I.	3.	9			-
w		31.6	>	548	0	06	6	S			SINE	>	240	224	183	185	161		F17	SPEEU		15	55	25	7		11	SPEEU	34	35		3.0	,
AIRFORCE			ס	-290	27	-334	27	Z B				=	000	017	-297	162-	-290		MAVE	3	2	0	Œ	5	-		MAVE	š	5	1	0 .	2 :	2
0115 A		-	30			7					-	20			20	74	23	.15	SIME	>	35	38	124	129	7	S	SINE	>	35	4.5	D .	500	
٠			20	7	-	2.2	27	28				2.0				2	20	VIATIONS		5	2.1	28	19	4 6	÷	NOTIAL		כ	21	56	4.7	5 :	c r
9/18/76	ONE MINUTE MEANS	IENTS	I	127.9	124.9	103.3	120.5	128.5		CUMULATIVE HEANS	IENTS	1		15/51	119.5	7 6 1	121.1	ANDARD DEV	1 51	ĭ	2.4	7.4	13.8	18.1	1.6	SWOTTE LYBO DEPT ATTOMS	15 1	H	5.4	5.6	0.1.	8 - 1 -	
3	E MINU	DEFF CLENT	0		305	396	254	307		ULATI	DEFFICIENTS	Q	L.	33/	370	201	567	5.1	DEFFICIENT	0.3.345	1	9 -	20.	13	33	5 T A .	OEFFICIENT	SPEED	92	3.6	3.6	4.	-
1 (1		OURIER C	5 %		22	0	5	37		100	7 11 E	3		- 7	c 3	7 .	6 1	MINUTE	U	3	4	0 0	r	7	10	> 1 4 1	R COEF	3	4	0	15	4 .	_
<u>z</u>		004	>	107	174	11	125	183			F 0.0			207	0	701	153	340	OURIER	>		5 72	7.1	12	31)	1	FUURIE	>	5.3	34	7.3	7.3	6.9
1 12			n	-265	-247	-280	-208	-238					0	-765	557-	000	-246		•	=		0 0	n co	32	4.5			0	<u>a</u>	2.1	36	1.5	4.5
+5110		-	ĭ	32.4	27.5	123.6	31.6	36.8			-		I.	132.4	129.7	0.171	130.3		1.		: :	7 7	15.A	9.2	13.4		-	ī	14.2	1.4.1	14.5	13.2	13.4
4			3		4 7 5	665	405	387					SPEED	397	370	2/5	5 5 5 7				27.10	97	14	9	1+			SPEEL		34	5	1)5	,
		FAKS	3		1.7	5.4	5.0	5			EAR'S			33	52	1	2 2		PEAKS			- 2	11	3.8	9		PEAKS	.0	0	25	3.1	3.3	4.6
;		1	,	197	7	415	107	172			•		>	797	187	977	137					15	- 6	7.0	15			,	-	76	ī	51	1.2
"				- 284	142-	- 321	-295	-147-					٥	oro.	-	T I	-291				0	7 .	702	7.5	000			-	69	19	10	6.3	14
HE 1 GH			1			. ~	7 2	J.					Z E		7		+ .n 3 - (W 1.14	-	, -	7	D			2.14		. ~	-	5	S

1:40: 0				92	9 .	22					-		7	26																
.		S				-, (25	,	. ~	7	~~																
START TIME END TIME		-	30	128.4	30	128.6				ī	130.1	129.2	129.6	129.3																
•	11	S				407			F17	SPEED	319	336	346	358					•	~	•	. ~								
9	WAVE FIT	3	-3	-20		-36			WAVE	3	- 3	-12	- 1 -	51-				I	8	7.		3.2			F		7 . 9			,
4	SINE	> (502	218	167	254			SINE	>	205	212	513	230			F 1.1	SPEED	26	31	5 7	20		F 1 T	4	26	32	7 7	7	
AINFORCE		5	-240	-273	5/7-	-317				>	047-	25	24	-274			NAVE	*	œ	1.5	ac c	<u> </u>		NAVE	3	Œ	7	12	2 5	
0115	-	30	13	0-0		7			-	30	13	=	+	13		SZ	SINE	>	48	7	33	20	5	SINE	>	3	e :	3 3	9 4	
7.6		20	77	12	77	10				20	22	11	6 1	1.9		DEVIATIONS		2	23	33	4 1 7 1	23	I A T I ON		>	53	32	2 3	7 7	
9/18/7	SIENTS	I.	126.3	126.9	124.1	126.6	37	CUMULALIVE MEANS	TENTS	ī	126.3	126.6	127.1	126.9		ANDARD DE	1 5.	ī	2.5	5 . 0	• ,	3.3	STAL DAED DEVIATION	2	1	7.9	5 .	0 0	o 10	
T VAD	COEFFICIENT	SPEED	116	319	0 0 0	380		MULAII	COEFFICIENT	SPEED	276	298	300	314		5.1	DEFFICIENT	SPEED	4,5	32	5 5	- 2		DEFFICIENT	03345	· + 3	4.5	2 8	0 -5	
6 h I C I	OURIER	*	۲,	4 7	2 2 2	11	-	3	431 XO	3	5	7.1	2.5	22		MINUTE	U	*	0	-	= =	= =	COMULATIVE	U		0	2 !			
2	F 0.1	> :	165		21.5	225			10.4	>	165	174	180	167		ONE	OURIER	>	5	5.0	÷ ;	9 -	COME	OUF LER	>	٠. -	7 .	11	3.7	
114		D :	917-	-253	447	-304				J	-218	-235	-237	-240				>	54	7.	r -	23		•	0	26	33		111	
01154	-	= :	136.4	123.2	122.	128.2			-	1 H	32	28	28	127.5			-	1	11.9	12.7	32.7			_		-	12.8	V	3 100	
C 4 >		SPEEU	361	34.0	10 7	71.				SPELU	327	338	345	369				SPEEL	57	30	07	50			0 F F 1)	5.7	000	7 7	5 5	
	FEARS		2	* "		9.5			PEAKS	¢	1.5	4.2	44	5.5			PEAKS		22	* :	28	21		F 1 4 5	.50	11	- :	71	7.5	
• 97		> -		100		755				>	113	104	717	717					5.5	0.0	701	15				55	5 5	1.04	1001	
" =		5		282	-295	-1117				13	-234	557-	747-	-270				- 0	11.6	2 1	n 15	74			0	4.15	£ 3	79	1.9	
n£1691		<u>z</u> -	-	v -	, ,	n				n 1 t.	-	*		+ x 3 - 6	8			11.	-		, ,	£			ii li		· ·		J	

0 :54:4			SP	54			1.5	98				SP	3.4	22	22	28	9																
START TIME END TIME			I	32	28	7	129.1	<u>~</u>				H	132.6	130.3	131.8	131.1																	
•	111		SPEED	368	361	354	454			611		SPEED	368	364	361	378																	
	X V E		1	• •	-28	- 15	•	:		WAVE		3	-3	9 - 1	- 1 6	7 7					I	8.6	6.9	7	36.9				ĭ		7.7	. 4	
	SINE		>	54	22	54	253			SINE		>	546	233	238	245			F 1.1		SPEED	38	- .	97	70			- 1 -	330	~	38	34	-
			n	- 768	-282	642-	-317)	-268	- 512	-267	-281			MAVE			=	<u> </u>	o .	5			* A V E	3		æ	1.5	
		,	ar	7	9	Ξ	27			_		3.0	7 -	15	_ T	- 0		510	SINE		>	7 1	رن به د	0	136	·	:	2 2	>	7 1	3.8	34	
NS		9	7	9	7	1.7	31		S		4	0	9	5.0	-	23		VIATI			5 .	٠ ٢	6 6	001	232	VIATIONS			2	53	0	4,3	
HIJUTE MEANS	ICIENTS	2	. 00	971	9.671	131.7	136.5		E MEANS	ICIENTS			129.6	127.5	9.471	129.3		ANDARD DE	2	7.				0.81	33.7	1.6			1	1.4	9.5	0.0	
ONE MIN	COEFF	CELEGO			000	306	326		UMULATIVE	30	- 2		303	307	105	315	i	,	ICIENT	0 3 3 6	,	000	23	. 2	æ (æ)	STALDARD	:		033	3.0	28	5.6	
0	#31400	3		. 00	, ;	?	12		000	HIER C	3		æ s	7		n z	1		COFFF	i.	1	1.1	0.1	13	2.7	UMULATIVE	COFFF		d.S ₹	ď	9 :	,	
	0 4	>	195	17.		141	204			F00	>		5 4 7	0 -	- 4	T 00	9,40	7. (OURIER	>	*		2 - 2	62	127	CUMUL	UR 1 E H		>	3+			
		ס	-235	-246	- 223	-254	-175				0	- 225	-241	-237	-241	627-			4	2	3.8	3.0	2.1	63	54		9		,	1	3.5	2 .	
	-	Ŧ	134.1	128.4	1 34 7	1.56.7	134.6			-			131.0	32.8	30.8	32.2			-	I	17.3	6.11	16.6	22.3	10.2		-			6.7		1.0	
		0	•	ın	4		0				4	4	374	0	•	0				EEU			53						44		200	6.3	
	PERS		97	5.4	7	3.9	43			PEAKS	•	10	14	4.5	43	43			F A K S	25	0.	1.5	2.1	2+5	11		EAKS		4	2 5	3.1	13	
		,	11.7	577	057	7.31	++7				>	141	1 15	7.40	2.36	4+7			1		7	45	14	T 7						145	-		
		5	-163	-240	-233	- 331	747-				5	-763	-778	. 47-	787-	+177				0	103	7.4	70						101		1	t) er	
		2 = = = = = = = = = = = = = = = = = = =	-	~	•		2				.10	-	7	•		s 3 - 6	. 0			HIE	-	7		• 4				2 2		3	-	5	

4:45: 0			SP	34	23	22	52	29				SP	34	29	27	26															
START TIME END TIME			I	134.1	133.6	131.0	126.5	138.3				ī	134.1	133.9	132.9	131.4															
END	F17		SPEED	342	371	352	348	377			F17	SPEED	34	355	354	353															
	MAVEF			-15	-27	-21	-20	-17			WAVE F			6-	-20	-20				ī	16.0	4.9	0.9	3.0			Ξ	16.0	12.1	10.3	
	SINE		>	227	554	230	504	275			SINE	>	227	539	236	229			F 1 T	SPEED	52	2.1	54	7 7		111	SPEED	25	27	25	
			0	1 4 7 -	-266	h97-	-276	-245				0	147-	-253	147-	192-			Y A	3	0	=	-			MAVE		6	1.2	-	
	_	;	30	20	9	13	13	7			-	30	2.0	-	16	15		5110	SINE	>	4.2	3.2	28	7 -0	8 2	SINE	>	7 h	3.5	35	
S		4	07	9	5.0	1 3	15	2.0		2		30	16	18	1.8	æ æ - ~		UEVIATIO	_	5	8.5	33	33	0 7	VIA110	_)	85	6.5	55	
MILUTE MEANS	CIENTS			133.2	130.9	128.2	123.3	137.5		CUMULATIVE MEANS	CIENTS	ī	133.7	132.1	130.6	129.0		STAUDARD U	5.	ı,	17.3	1.0	6.0	13.8	STANDARD DEVIATION	ıs	ž	17.3	13.1		
ONE MIL	COEFFICIENTS		SPEED	567	308	312	311	327		MULATI	CUEFFICIENTS	SPEED	7.54	301	3/15	306			COLFFICIENTS	SPEED	4	52	- :	5 2 7 2		FICIENT	SPEED	4	3.7	3.1	
0	OUNIER			-	49	27	5.4	52		D D	HAILHOO		1.3	2 4	24	27		MINUTE			13	0	÷ 0	2.1	CUMULATIVE	0.00		-	2.1	1.1	
	F 0			187	200	- 6 -	9	534			F 0.1	>	D	161	0	187		0116	DURIER	>	3.6	77	32	5.5	Cum	OUFIER	>	3.6	30	3()	
		,	0 .	717-	-232	-243	-257	-215				Э	-217	-221	627-	-235				2	8 8	36	7	29			>	9	0 .	15	
	-				132.4	35.	50	0.0			-	Ŧ	128.6	130.4	132.1	131.5			-	111	10.6	1		15.0		-	I	5	12.2	•	
			21 51 11	155	267	205	343	340				SPEED	151	354	199	364				SPEED	. 7	30	3 2	25			SPEED	5.5	5.6	31.7	
	FF AVS			,	74	14	7	6			5 # 7 3 4	š	3.4	•	*	5.5			PEARS	5	3.5	3.1		- 5		P + A × 5	.n	35	¥ 7	3.0	
•				017	133	457	917	567				,	414	977	187	434				,	* 5	0	7 4	100			,	+5	5 3	200	
u			2 7 7	147-	497-	1567-	-256	9571				5	-261	147-	147-	-250					940	16					0	0.5	15	7.	
		-		-	2	5	7	un				111	-			, 3 - 7	0			<u>=</u>	-	4 "	,	.0			1111	-	7	3	

4:45: 0		SP	58	21	5.4	7 7	29			SP	56	25	200	29													
END TIME		I	36.		33		42.			ī	136.3	134.7	30.6	132.9													
END END	۲.	SPEED	355	379	364	388	423		F 1.T	SPEED	355	368	113	382													
	MAVEF	3	7	-22	- 15	8	-15		WAVE F	3	-	œ .		-17			F	5 . 7	5.9	3.8	11.8			ī	2.1	5.8	
	SINE	>	2	5	7	0	331		SINE	>	552	256	233	255		F11	SPEED	23	28	15	5 -		111	SPEED	2.3	21	
		ם	+ + 7 -	467-	-264	-319	-249			Э	+ + 7 -	-260	707-	-270		WAVE	*	•	-	9 :	- <u>-</u>		WAVE	t	9	10	
	-	30	1	80	13	54	۰		-	30	7	=:		7	SNO	SINE	>	6 1	28	21	55	SZ	SINE	>	61	23	
S		70	1.8	91	61	36	6-			30	- 8	17		21	DEVIATIONS	-	0	38	33	33	78	DEVIATIONS	-	ם	38	0.4	3
MINUTE MEANS	IENTS	ĭ	135.3	131.6	132.3	116.4	139.2	CUMULATIVE MEANS	1ENTS	Ξ	135.3	133.3	7 0	131.0	0	S	Ĭ	9.9	5.0	4.7			S	ĭ	9	4	
	145	PFEU					351	ULATIV	COEFFICIENT	-	262	314	215	320	E STANDA	FICIENT	SPEEU	34	52	34	3.6	STA OARD	ICTENT	SPEEU	3.8	1,1	
07.6	~	2	25	30	17	20	56	Ē	2	3	52	27	7 7	57	MIDUTE	COEF	ž	c	10	5	- 0	CUMPLATIVE	COEFF		0	0	
	FOURIE	>	107	220		7	197		FOURT	>	507	213	717	207	940	DURIER	>	æ	5.4	0 1	2 2	COME	UURIER	>	1.1	2.3	11
		ם	-205	1 7 t H	- 22.	- 243	-225			n	-205	-228	-730	-235		•	>	3	3.5	38	6.3		•	>	47	377	
	-	11	139.0	132.7	. 27 . 4		146.6		-	ī	139.0	135.6	136.2	136.8		-	I	- 30	.0	0	19.3		-	11	18.0	1.4.7	, .
		SPEED	368	3 11 3	10.3	1 1	= = = = = = = = = = = = = = = = = = = =			SFEED	360	376	377	488			SPEED	+,0	2 +	17	47			SPEEU	7.5	7	
	EARS	,		6.4			1.7		FFAKS	•		3 3	e F	5.2		PEAKS	-5	7 %	5.0	3+	, ;		6.4.5	<	7.5		7 1
• • • • • • • • • • • • • • • • • • • •		,	101	147			3 + 5			>	147	697	197	122			>	6.9	19	11	137				6.0	1.00	
н		2	-731	- 2.7.1		10.	-230			2	-731	-253	- 561	-262			-	30	7.4	===	132			0	9	2.6	
NE 1 6.41		11111	200			7 3				=======================================	-	7	7	T J	-71		2	-	8	(4)	T S			= = = = = = = = = = = = = = = = = = = =	-		,

4:50: 0 4:55: 0				5			0.0	29				ų.		7	1	9														
7			SP	3	-	1 :		2 3			9	-		•	37	•														
START TIME END TIME			I	137.6	134.4	0.031	0	156.2			ĭ	137.6	136.1	143.7	145.9	147.9														
5 T			SPEED	437	422	1 3	1 3	387		F17	SPEED		430	435	427	6 - 4														
	WAVE FIT		2	-34	- 32	-		-23		NAVE F			-33	-26	-24	-24			ī	6.5	4.5	18.8	19.7			-	0.0	7 . 1	1 . 4 .	
	SINE		>	320	296	101		348		SINE	>	320	308	338	338	340		F 1.1	SPEED	α	63	16	9 ~		F1.1	SFEED	8	1,1	S	
				67-	57-	-		151-				-29	-29	-24	-233	-21		A V			2 H	2.0	1.7		AVE			30		
	_		31)	20	-	1.7		2 ←		-	30	20	17	11	17	a I	540	SINE	>	19	55	3.6	50	S	SIME	>	19	44	7.1	
NS			70	23	27	2.1	2.4	18	S.		97	23	52	5.4	54	63	DEVIATIONS	-	0	7.1	4.5	136	67	VIATIONS	_	n	7.1	5.7	110	
DIVE MINUTE MEANS	CLERTS		I	135.2	131.8	156.0	161.7	155.0	PPELATIVE MEANS	116415	ī	35.	33.	- 5	144.2	•	STANDARD D	S	Ξ	8 • 9	7.4	51.6	12.9	ت		H	2.4	7.0	17.4	
74E 1811	COEFFICIERTS		SPEED	363	364	348	111	336	PULATIV	COEFFICIENTS	SPEED	363	364	345	356	356		OFFICIEST	SPEEU	6	5.1	7	¥ -	STAROAFO	FFICTENTS	SPLED	9.3	44	1.7	
()	9 3 1 2 m 0		Z	5.4	53	2.1	3.2	2.5	Ē	DUNIFH		5.4	47	5.	27		MITTE	U		28	3.5		- 2	CUMULATIVE	5 n E		17	2.0	5/	
	10.4		>	557	067	317	175	565		F01	,	557	141	7/1	272	, , ,	ONE	OURIEP		0.9	40	25	7	Conn	n al ann	>	(19	·	1 5	
				997-	-269	+ + 1 -	-143	-134			2	552-	797-	-: 23	101-				-	7.1	5 5	121	79			-	7.1	643	1 2 1	
	-		I	6.04	132.1	153.2	142.3	150.B		-	1.1	145.9	139.0	143.6	143.3	•		-	# =	45.5	5.0				-	1	5.5	11.1		
				55.	136	391	575	20%			SPeri	435	130	96.	13.5				6.50	ī	-) ·	-			177	ī	1	4.4	
	PEA.S			1	7 1	45	4.12			4 . 5		7	0	11	1.7			. 1 4 . 3	5	1.5					f A+ S	3.15	0.1	7 1	11	
					141	*11*	11.1	1.4			,	111	141	374	155				>	,	* :		3.4			>	.1.	1 45	135	
					. 75 -	9117-	957 -	5.61-				* 1 % D	197-	5. 7.	11.7-					113	114	4	4.0				713		10.0	
		11.1			,	. 3	16					7			, ,				2.12	-						n I :-	_			

B - 72

	4:50: 0			36	37	36	43	1 T				SP	37	38	34	40																			
	START TIME			I .	133.8	141.5	142.7	153.0				ı	3.	:		142.8																			
• 0	STAF	F 1.1		,				1 1		-11		SPEE	43	4 0	7 3	1 6 6																			
P OH		N A V	3	2 0	0.5	200	- 25	-22		WAVE		1	-30	-30	07-	+2-					Ŧ	10.8	6.3	7.2	17.8					Ξ	10.8	10.4	8.8	12.0	1
CE		SINE	>	000	100	0.0	505	402		SINE		> 6	546	7 4 6	346	376			F11		SPEED	06	9	90 1	55	į.		F11		SPEEU	06	83	73	69	10
AIRFOR			:	- 303	- 304		005-	-163			:	2	- 303	7071	- 278	-254			MAVE			2.1	53	9 :				MAVE			2.1	2.1	0	r :	-
0115		-	2			. :	0 0	22		-			3.0	200	0 0	20		S	SINE		>	63	10	73	2.65			SINE		> 1	63	56	000) ; x r	0
911	S		20	*	3 7	200	2 2	52			25	,	6 6	2 2	2 2	52		VIATIONS			>	74	62	VC	124		STANDARD DEVIATIONS			· c	74	65	3 C	0 - 0	-
4/18/76	JTE MEAN	TENTS	ī	128.0	141.8	1		5.00	CUMULATIVE MEANS	IENTS	1	2	4 "	136.3	7	0 - + + 1		DARD DE	2		-	~		DI	19.5		ARU UEV	1 5	-	- :	12.8	13.2		1.4.	
VAD	ONE STRUTE ME	COEFFICIENTS	SPEED		378	424	171	356	MULATIV	COEFFICIENTS	03365			372	372	369		E STANDA	FFICIENT		W	•	2	د ر 1	9			COEFFICIENTS	3	u.		7 7	7 3	2.0	2
15 1	٥	OUMIER	z	σ.	4	3.8	3.9	54	5	HIER				35	3.6	33		MINUL	COEFF			43	0,0	25	27		CUMULATIVE	COEFF	V	2	67	2.5	27	27	
E IN GPT		F00	>	182	292	321	321	315		F 0 U	>	182	237	769	281	288		3110	OURIER	2		0 0	100		7 0		CUMUL	OURIER	>	. 2	0 1	, a	82	61	
=			0	-235	-432	-273	-168	-130			٦	-235	-233	-248	-229	-210				2	, ;	, ,	0.0	00	601			u.	٦	-	2 3	0 0	75	0.6	
01154		-	I	131.1	150.4	150.8	146.2	152.1		-	T.	131.1	140.7	144.5	6.55	146.3			-	1	5			4.7	11.5			-	I	15.0	0 0	3.5	6.1	12.0	
V A L			SPEED	7 7	213	275	45.3	+15			44	-	D	154	T	30				i	, -		3.7	3.2	5.5				EED	-	. 0	7.6	7.0	19	
		FEARS	š	11.0	70	9	11	~		FEAKS	¢	116	16	6.5	α	7.9			EAKS	0.5	-	1 4	3.3	3.0	7			EAKS	£ 25	1		50	5,	4.5	
			,	3.01	555	453	370	-			>	301	315		347	100 t			a.		1.26	67	5.6	7	115			a	,	126	124	601	16	7,	
1			5	-31%	-251	64.7-	542-	-216			0	516-	-285	-272	-266	157-				0	78	3.8	151	12	18				5	7.8	0.9	5.9	5	6.5	
91	1		2 2		7	3	7	ur.			414	-	7	m		-73	3			H 14.		2	3	,	'n				2 2		~	•	,	л	

4:55: 0				2	1	2	4	8				•	5			. ~																	
un.			SP	~	7	7	•	•				SP	т	-		, .																	
START TIME END TIME			Ŧ	141.2	141.6	129.9	122.0	122.0				ĭ	141.2	**	137.8	3.0																	
STA END		1.1	SPEED	376	442	391	404	382			F17	SPEED											- 6	. ~	. ~					7	- •	80	3
0 6 OH		WAVE FIT	*	-	- 20	• 13	- 12	-			WAVE F	3	-	-10	5 :		-				I	30.	5 4		19.7						18.6		
w		N 3N1S	>	261	343	249	213	197			SINE	>	197	305	287	269	167		113		SPEED	97	5 -	. ~	1 4			F11	SPEEU	56	37	35	36
AIRFORCE			5	-207	346	766-		100				>	-207	-240	-258	-275	187-		1		3	51	7 .		23			N V E	3	21	1.5	-	9 1
0115 A		-	30	± ~					2		-	30	7	+	13	5 .	<u>.</u>	SNS	2	31.10	>	148	6.3		131		SZ	SINE	>	1 4 8	000	102	Ξ
			20	0		7 -	, ,	0 7	:			20	20	20	1.8	50	-	DEVIATIONS			ס	120	90 0	9 6	7 4	2	DEVIATIONS	_	>	120	0 4	00	75
9/18/76	ONE MINUTE MEANS	IENTS	1	117.4		1.04	0.871	0.171	•	CUHULATIVE MEANS	STNTS	ĭ	137.6	138.9	135.5	132.0	129.3	STANDARD DE			ī	31.8	11.8	7 . 8	900		STANDARD DE	S	ĭ	31.8	22.2		20.0
9	IE MINU	COEFFICIENT		37.5.0	375	365	354	33/	332	HULATIV	OURIER COEFFICIENTS	CPEED		345	3 4 8	345	343			FFICIENT	SPEED	35	7	22	.	?		FFICIENT	SPEED	35	7 0	96	1 7
5	0	œ			0.7	23	1 5	-	50	5	E R	3		22	7.0	8	1 6	HINUTE		COEF	3	52	56	=	22	5	A T	COE	3	25	5	217	23
12 641		FOURIE		- !	707	276	217	173	+ 9 -		FOUR	2		244	236	221	208	ONE		OURIER	>	133	7.0	47	95	071	CUMULATIVE	FOURTER	>	133	901	- 1	101
3 1 1			;	D	-163	-227	-275	-275	-267					5	-231	-242	-248			_	0	0	5.1	52	0 +				>	101	0.6	2 0	63
+5110		-		I	138.6	141.9	124.5	132.0	134.3		-		1	138.6	136.3	134.5	134.5			-	ī	37.6	7.	17.9	12.7	15.7		-	ī	37.4	25.5	23.9	20.2
9				SPEED	374	+ + 7	397	417	* 0 *			- 1	SPEEU	374	7 0	410	404				4		5.4	20	23	4			03335			т,	90
		PEAKS			38	67	7+	5.7	7		2 4 4		z	38	5.0	2,2	7			SXV3d	•	7	33	20	36	7.1		PEAKS	3	1	4	3 (4 3
		a.		>	857	87	217	271	278				>	857	307	277	277				,	200	2 2	102	2.6	901			7	300	142	135	11.5
				0	188	-271	- 113	+00-	-274				0	-	2	N 6	-270				-	,	י ע	7 8 9	74	2.0				, ,	77	8.2	76
HE16H1					-				S				Z	-	2	9 5	- 15					-		, -	3	S					7	3	ar un

5: 0: 0		:	46	55	9	5.8	4 S			SP	36	0 3	36	34	38													
END TIME			- 4		36	•	131.7			Ŧ	146.3	142.7	41.9	139.2	34.5													
EN	F11		41.0		434	7	437		=======================================	SPEED	-	428	434	435	65													
	WAVE	3		. '	7 .	-	- 14		WAVE	2		.5	٥	-12	-			Ī	12.3	27.8	6	6.4			ī	12.3	20.5	,
	SINE	>		2 0	D •	2	329		SINE	>	336	321	327	315	5		F17	SPEED	~	7 (07	4 4		F 1.7	SPEED	37	0,	, ,
		-		n .		m 1	-322			>	-233	-246	-257	-275			WAVE	3	1.2	9 -	D- (0 9		N V E	1	1.2	13	
	-		2 0	1 0	0.7	0 .	23		-	30	23	22	23	21	,	SNO	SINE	>	53	134	9	32	8	SINE	>	53	96	0
s z		30	25	3 6		6.2	25	10		20	25	25	52	24		VIATI	_	>	0.6	151	0	18	VIATION		>	08	113	- 0
ONE MINUTE MEANS	ICIENTS	1	142.4				138.0	VE HEANS	CIENTS	ī	142.4	0.141	141.0	138.0		NOARD DE	S	ī	11.7	29.7	0.71	12.1	0	1 5	ĭ	11.7	21.0	0
NE MIN	COEFFI	CPEED		, ,	0/0	2 .	353	CUMULATIVE	COEFFICIENTS	SPEEU	330	351	348	355		TE STANDAR	DEFFICIENT	SPEED		38	3.3	63	STANDARD	FICIENT	SPEED	6.5	5.7	0.2
0	OURIER	3	4	,	0 0	7	1 4	00	URIER	*	9	=	9-	20		HINUTE	U			31	17	25	CUMULATIVE	COEF		0 -	52	3.5
	104	>	255	25.1	340	227	254		101	>	S	5	5	249		ONE	FOURIER	>	5.0	115	7 .	7 7	0 1 0 0	FOURIER	>	5 ()	82	1 1
		2	661-	- 2 2 5	-212	2001	-235			ס	661-	-211	-212	-230				>	7.8	77	0 0	00 00			5	-	601	40
	-	1	4 6		200	9 0	127.8		-	ī	4	33	3.9	135.5			-	ī	1.9	32.0	, , ,	19.3		-	I	~	22.9	
		SPEED	42	0	7		457			SPEED	454	0++	7	7 - 7 7 7				PEED	53	C C	7 0	0.0			PEEU	53	- 5	,
	PEAKS	2	26	7 7		1	20.00		PEAKS		56	34	7	7 7			PEAKS	3	31	5 7		63		PEAKS	S	3.	30	2.2
•		>	353	787	300	278	157			•	353	321	316	29.7				>	99	203	0 0	117			>	0	147	٧
		0	-228	+55+	100	7 7	-318			0	52	57	27	1243				5	38	0- 00 10- 4	70	9.5			n	38	25	1 1
,		Z	-	~	- 17	3	, ru			NIN	-	2		r un	75			2 1	-	~ ~	7 3	· in			2 E	-	cy =	7

0:0																																
5			SP	34	35	27	56	30				SP	34	34	32		5															
START TIME END TIME			ī	137.2	124.4	135.2	129.6	134.7				ī	37.	130.3	131.9	131.3																
		11	SPEED	418	416	439	405	422			F11	SPEED	418	417	454	419	3				•								•			-
0 0 0 1		WAVE FIT	3	-	- 18	-17	-17	-26			WAVE	7	-	-15	91-	9				ī	13.6	8	7 . 6	8.0				Ŧ	13.0	12.6		10.01
3		SINE	>	303	233	311	257	297			SINE	>	303	592	279	274			F11	SPEED	34	34	5	56			F 1.T	SPLED	34	33	י ה	36
AIRFORCE			ס	-274	-339	-305	-307	567-				5	+ 17-	-308	-308	-307	n n		MAVE	3	6 1	=	0	2 - 2			N A V E		6	2.	2 -	1 - 1
0115		-	30	15	91	20	=	15			-	30	15	15	17	 • ·	2	SNS	SINE	>	4	25	63	09		15	SINE	>	ď	75	200	67
16	S		20	5.4	97	20	15	15				20	54	52	23	21	7	DEVIATIONS		7	55	47	0 +	32		DEVIATIONS		ם	55	2.5	U 3	2 2
9/18/16	ONE MINUTE MEANS	CIENTS	ī	135.8	121.7	131.9	125.9	131.9	1	VE MEANS	CIENTS	ī	3	~	2	128.5	v	ANDARD DE	1 51	ī	17.4	10.1	9 . 5	8.3		STA JOARD DEV	1.5	ı	17.4	15.4	2.5	11.2
V A U	NE MIN	COEFFICIENT	SPEED	346	355	358	356	363		CUMULATIVE	CUEFFICIENT	SPEEU	3.46	151	353	354	050	5.1	OEFFICIE TS	SPEED	27	34	2.6	0 -			06881616	SPEED	27	30	96	3.5
5	0	OURTER	3	52	2.4	57	54	5.6	-		OURIER	7	52	54	5.4	24	C)	MINUTE	COEF	3	3.1	21	× 29	20		CUMULATIVE	COEF	3	3.1	52		23
IN 611		F00.	>	240	182	239	503	243			F 00.	>	1147	503	214	216	777	ONE	DURIER	>	8 1	5.)	67	54		COMO	PURIER	>	8 1	07		6 - 6
11nt			ח	-230	-298	-261	-284	-268				כ	-230	-261	-265	-249	197			0	99	5.3	36	23	,			٥	44	19	ם מ	44
07154		-	I	136.4	132.8	137.0	130.3	134.6				T.	136.4	134.4	135.3	134.1	7.161		-	I	7.8	17.2	~	o -	,		-	H	7.8	13.3	1.5.	12.1
0 4 7			SPEED	433	427	137	403	431				SPLED	+33	930	+35	425	07			SPEED	2.3	5.1	33	33				SPELD		0+	44	2 9
		PEAKS		27	13	5.5	*	7.5			PEAKS	ŧ	2.7	5.2	5.5	65.	6.0		FEAKS	5	3.6	3.6	30	0 -			FEAFS	~	3.6	÷ 0	3.5	3.4
•			>		187	311	653	167				>	316	567	3100	147	71.7				5.5	100	13	5.2				,	25	H 3	200	0 50
			5	+62-	662-	P-290	-304	-290				D	167-	162-	- 542	-247	147			7	+	ά	11	3.5					7.	9	200	7.9
HE 1 SH			2 2	-	'	-	*	5				2 2	-	7		в.	-76)		214	-	7	9					MIN	-	7		· ./4

0 : 0	5 1 0														2	•																	
2	5		5	27	7	5	9	~				SP	2	36	3	3	30																
⊢	TIME		I	133.6	23	1.0.1	26	30				ĭ	33.	28.	132.9	31.	31.																
0.	END	FIT	44	384	N	0	9	0		:	-11	SPEED	384	101	101	395	395					.5	.	_	60				.0		80 .		
0 0 H		MAVE	3	-20	+	-20	- 1 2	-25			MAVE	3	-20	-17	-18	-17	-19				I	1	=	12.	13.8	•		ĭ	,		-	5	•
C.E.		SINE	>	564	239	302	217	255		2	SINE	>	9	S	270	2	5			F11	SPEED	2	5.8	23	26	,	111	SPEED	54	30	O :	7 :	7,
IRFOR			Э	27	34	-256	28	53				0	27	30	-289	7 8	53			WAVE	3	œ	•	0	0 7		× ×	7	00	6 0	a c a	0	0
T15 A		-	30	10	22	7	9	0			-	30	01	9 [15	15	<u>+</u>		S	SINE	>	53	101	31	00 a		2 2 2	>	58	7.5	4 6	7.5	9
76 0	S		20	91	53	50	23	*				20	91	2.0	20	2.1	61		VIATION		5	5.4	53	14	t 19	SNO I TAI		ר	54	4.5	29	99	5.3
9/18/7	TE MEAN	CIENTS	I	130.6	2	139.5	2	N	E MEANS		CIENTS	I	30.	25.	130.9	23.	29.		NOARD DE	2	ī	. 0	•	13.5	3. d			ı	4.9		12.8	÷	,
× ×	ONE MINUTE	COEFFIC	SPEEU	326	363	350	311	355	UMULATIVE		COEFFIC	Lad	N	7	347	~	-		5 T A	FICIENT	SPEFO	~	8.5	43	37	6 5		SPEED	37	99	5.7	5.5	5.5
1 01	0	BURIER	3	5 4	1.2	53	9	58	0.0	0	x	3	5.4	α.	23	2.1	2.2		MINUT	COEFF	3	1.5	5 ()	-	20	<	0.00	3	15	80	œ :	00	<u>x</u>
1 N G 3		100	>	7117	50	157	185	221			XDO4	>	2111	202	223	214	215		ONE	FOURTER	>	3.8	104	33	83	20 20	800	>	38	7.5	67	7.1	19
TIME			5	-245	50	N.	23	27				ם	24	27	-255	52	25				7	34	-	7 00	30	2		5	34	4 +	50	oc un	2.0
01154		-	I	134.1	126.6	138.7	129.2	130.1		•	_	ĭ	34	30	133.4	32	32			-	17.1	14.7	24.1	15.0	0 4			111	14.7	10.4	17.4	15.7	7.
0 4 7			SPEED	393	413	403	200	393				SPEEU	593	404	405	001	399				4		0+	+ 6	3			PEEU	36	33	3.6	3.5	£
		FEAKS	ŧ	5 3	6.3	2.3	05	6.7		-	F. A. S	£	6.71	2.6	5.7	55	2.6			PEAKS		200	5.4	32	5 2 2 2		7 A A S	S	28	28	5.5	26	17
79.			>	197	434	557	1 + 7	5.52				>	191	94.7	597	667	8 S 8				>	0.0	153	.n	9 -			>	53	117	9.5	9.0	9
			0	-411	+303	-261	-295	+296				3	27	60	182-	11.7	2					× 0.	2 4	0.0	15			0	6.11	0	9 :	15	E C
M law			21 6	-	7	~	*	5				214	1	2	~		л 3 – 1	77			2 1		7	7	7 4			2 2	1	2	m :	·	n

	5:5:0		SP		36	, ,		6.6			as		32	55	46	37															
	ART TIME D TIME		I	90			2 6	131.0			ī		. ;		31.	131.0															
	END	11	SPEED	35	34.2	1	-	405		=	SPEED	•	360	386	394	396															
0 6 OH		MAVE FI		0				-		WAVEF		0	0 0	0	-	=					5			19.0			ī	5			4
CE		SINE	>	264	215	294	232	266		SINE	>	244	242	259	252	554			F11	SPEED	2	22	66	0 7 6		F11	SPEED	25	23	0 4	57
AINFOR			٥	22	1	3.2	32	-300			5	2 2	677	27	28	2.8			MAVE	3	4	16	1 4	23		MAVE	1	4	-:	2 5	25
0115		_	30	1.8	=	3.1	22	0		-	30	-	2 5	20	20	1 8		SNC	SINE	>	5.8	9 2	•	129	U	SINE	>	5 8	73	0 0	0 50
176	S		20	23	17	42	26	6	5		20	23	20	27	27	25		VIATION		5	19	5.5	85	7 8 8	V 1 & 1 1 0 0 0		J	19	7.5	77	7.1
9/18/7	MINUTE MEA	CIENTS	I	38	123.1	26	22	31	MEAN	CIENTS	H	2	131.4	2	28	28		DAKD DE	15 1	Ħ	0	-	7	18.2	0.4.90 0.5.4	2	I	0	17.9) ~	50
TVAD	ONE MIN	COEFFI	SPEED		316	315	327	341	UMULATIV	COEFFIC	SPEED	298	306	308	314	319		TE STAN	FICIENT	SPEED	37	56	96	£ 00 00 00	S T A 1	FICIENT	SPEEU	3.7	33	5.7	2.5
υ Ε	0	ORIER	×	1.3	0.7	10	52	20	0.0	HIER	ž	13	12	=	15	9		D N L N	COEF	t	1.6	5.4	52	22	LATIV	000		9 !	0 =	2.1	2.2
5 N I		F 0.1	>	-	170	-	Œ	14		F00	>	-	193	00	0	0	- 2	ONE	DURIER	>	14	8 2	7.3	7.1	CUMU	90 H 1 E H	>	47	67	15	7.5
1111			2	0	-253	52	52	t t			0	-	-220	N	N	N				Э	16	47	011	æ -			2	16	0 0	75	6.7
01154			I	7.	141.5	~	7 .			-	ī	137.6	139.4	140.5	142.4	140.5			-	ı.	9			11.5		-	T		10.6	-	
V A D			-al	4	383	N	7	N			143	0	375	O-	1	3				12	97	57	0 .	9 89			PEtu	5.6	6 Y	7 5	2.5
		7 A A A S	š	3.8	35	1114	13	4.0		PEARS	t	3.8	3.7	9	E I	7			FEAKS	* SP		50	0 0	5 5		LAKS	57	- :	200	7.4	1.7
4			>	40	0.67	4	Chr.	PN-			>	0	276	0	0						9.0	0.3		2 6 0			>	D 0	9.9	13	1.1
11.00				23	-227	7	2	100				23	-234	23	× 5						70	7 8 7	200	n .n				70	7.0	65-	7
19	,		Z E	-	7	9	7	NO.			MIC		7			78	3			2711		7	1 3	r un			2 .	- 1	y 19	*	

0:0																																	
·	:		0		000	,	6.5	7 7				20	-	3.5	32	, ,	36																
ART TIME	•		1	137.4		000	0000	141.4				±	37	7	34	, ,	138.5																
90. STA		F11	-	38	0	- 4	0 4	1 1 0 0		111		w	38	0	2	-	436																
o O H		WAVE	3	-5	1	0	0	-2		۱ × ۲		3	-5	2.	0 -	-	a0 • 1			I	2	12.5	1	36.3	6			ĭ		12.3	10.6	0.0	18.2
Ç.		SINE	>	281	755	340	124	346		SINE		>	182	268	295	302	31.1		F11	SPEEU	20	38	0	7	35		111	930		2 2	o as	5.6	53
AIRFORCE			3	+57-	687-	+337	-213	-275)	-254	- 272	-296	- 476	-276		N A VE		r	15	13		2		MAVE	3	U	0 0	13	2	1.3
0115		-	30	1 8	10	1.2	2.1	2.1		-		30	00	7	1.3	5	1 6	52	SINE	>	67	83	47	9.5	53	2	SINE	>	4.7	7.3	7.3	7.5	7.3
176	45		20	61	1.3	97	1 9	28				20	67	1 8	5.1	2.1	2.2	VIATIO)	5 1	45	6.3	556	0	VIATION		0	2.5	- x	10	133	122
971877	MEA	CIENTS	11	33.	25.	136.5	7 7	10.	VE MEANS	CIENTS		Ŧ	33.		32.	34.	3	NOARD DE	5	1.1	13.0	13.9	14.7	36.6	•	ARU DE	2	H	13.0	13.4	13.9	21.3	13.6
VAD	ONE MINUTE	CUEFFI	SPEED	314	335	374	378	352	MULATIVE	COEFFIC		SPEED	314	324	343	351	351	NUTE STAT	FICTENT	SPEED	3.0	00 +	69	63	35	E STAID	FICIENT	SPEED	3.0	0,	2.0	2.3	5.8
- -		URIEH	7	T	1	3.9	H .	13	3	UHIER		¢	0	ar:	0	6	<u>-</u>	MINU	COFFE	£	œ _	5.4	27	5 1		ATIVE	CORF		9	20	27	5.2	7.
E		F 0 (>	217	161	254	255	265		104		>	217	503	223	731	234	ONE	OURIER	>	64	÷	4.5	0.	n	CUMU	UUHIEH	>	6.5	7.3	6.9	7.3	7.1
ī			0	-751	-263	-259	-180	-222)	-751	245-	847-	-232	-230			>	·	33	*	57				D	0.5	* *	19	171	~
01154		-	11	141.7	138.0	130.4	146.3	137.1		-		1	141.7	•	0 0	D	•		-	ı	15.2			4.0			-	± +	15.2	14.5	11.2	17.9	•
C & 3			SPEEU	555	107	200	163	t 2.5				3F E E U	363	004	131	7) 7	¢			FED	77	5 :	0.	× 0				0.33	1 1	17	30	2.5	.n
		F. E. E. S.		3.7	12	74	9.5	3.5		F 5 4 5		<	1	3 .	2 2	,	7		SXV34	e .	7/			0 4			* A * S	-	7.7	3.5	100		
÷			>	303	* * *	366	334	7.5.5						300	112	7	7				0 4	10		177					14	3 0			
11				1630	50/-	+112	27.40	9					0000	1000	7 7 7					3.0		1 5	211						1.4	2.4	2 .		-
PE 1 GH 7			MIN		7	71 :	Τ.,				M 1 1				7 7	4				 -			7	5				1111		,	m :		

	#	H (4.4)	, s.															START TIME END TIME	5:10: 0 5:15: 0
1.25 1.55										1 I	JTE MEAN	5							
1				× <				0	Υ 	DEFFIC	CIENTS		_				-		
1	-	0	*		لغا	1,1	2	>		0334	Ŧ	20	30	כ	>		SPEED	ī	SP
7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -		-334	10.74		6.6	126.2	-124	222	0		152.4	09	7 +	-183	345	01	456	151.4	-
1	2	- 3AC	161		7	112.7	-203	515			136.6	78	99	-221	596	- 18	371	143.1	23
	3	552-	0 7		7 1,	124.6	-330	192	1		115.0	2.6	48	-364	306	15	765	120.6	31
CUMULATIVE HEANS	3	-340	114		6.5	106.6	1.9.1	101	+ -		238.4	5.8	35	326	552	-63	415	232.0	5.9
	LITY .	-53-	313	_	7	145.6	=	191	0		192.0	t. 9	σ σ	153	218	16-	331	201.1	90
CUMPLIATIVE HEARS																			
1																			
									100	ULATIV	VE MEANS								
1				E A.K.		-		F00		OLFF 1C	SIENTS		-			VAVE F	11		
1	1111		>		SPEEU	Ī	3	>		a	H	70	30)	>		0	ī	SP
1	100	,	1.64		417	124.2	-124	777			157.1	09	4.2	. 8	345			151.4	-
3 - 324		,	7	-	+3+	124.2	-135	22.1	-	284	150.2	63	5.	0.00	338	•	1 1	150.2	3.8
1	1995	1	436	τ	131	124.4	-206	211	-	326	137.4	09	4	-253	327	22	462	139.4	35
FEARS 126-11 -152 194 0 313 152-4 61 51 -153 306 0 440		,	122	4	454	122.3	-175	107	0	315	145.8	09	45	-204	321	15	458	147.2	3.7
		1	587	1	430	126.1	-152	194	0	313	152.4	6 1	5	-153	306	0	0 7 7	154.9	43
TEARS 1. FOURTER COFFECIENTS 1. FOURTER COFFECIENTS 1. STRE MAVE FIT 1. FOURTER COFFECIENTS 2. FOURTER COFFECIENTS 2. FOURTER COFFECIENTS 3. FOURTER COFFECIENTS 4. FOURTER COFFECIENTS 4. FOURTER COFFECIENTS 4. FOURTER COFFECIENTS 4. FOURTER COFFECIENTS 5. FO	0																		
1								dere	020			1 4 1 4	245						
10				E 2.2		-				TCIENT	15		SINE	* A V E	111				
65 176 46 60 17.0 124 63 22 38 30.5 230 159 47 109 3 156 214 147 74 36.5 74 165 32 127 21.9 184 267 70 292 4 75 24 25 24 25 24 25 21.9 24 267 70 292 5 25 25 25 25 25 25	4114			ć	(a)	111	>	>	5	2	Ξ	5	>		9	ĭ			
1	-	8.9	17.0	14.6		17.0	N.	6.3			30.5	230	159	47	109	35.6			
3 '15c 214 147 74 36.5 74 165 32 127 21.9 184 267 70 292 5 25. 105 173 67 37.4 344 115 10 78 81.8 313 1 83 145 CUMULATIVE STANDARU DEVIATIONS 14 6. 127 49 60 17.0 124 63 27 36 30.5 230 147 45 105 2 6. 127 49 60 17.0 124 63 27 36 30.5 230 147 45 105 3 6. 127 59 59 23.6 149 102 23 38 41.3 262 179 59 173 4 75 145 103 59 23.6 149 102 23 38 41.3 262 179 59 173	4					0.	0	-	0	2	0.	0	0	0	0	0.			
CUMULATIVE STAMDARU DEVIATIONS THAN'S IN FUURIER COEFFICIENTS IN FUURIER COEFFICIENTS IN SPEED A SPEED A SPEED A SPEED IN UN V N SPEED A S	ret.	251	417			36.5	* .	165	3.2	127	21.9	1 8 1	267	70	292	24.5			
COMPLATIVE STANDARD DEVIATIONS 10	- 5	263	1156	-		37.4	344	116	10	78	æ	313	-	93	145	5.4.5			
CUMULATIVE STANDARD DEVIATIONS THAN SPEED IN FOURIER COEFFICIENTS I SINE MAVE FIT IN SPEED IN SPEED IN STANDARD DEVIATIONS IN SPEED IN SPEED IN SPEED IN SPEED IN SPEED A SPEED IN SPEED IN SPEED IN SPEED IN SPEED A SPEED IN SPEED IN SPEED IN SPEED IN SPEED A																			
IN STREET IN FOURTER COLFFICIENTS I SINE MAVE FIT STREET IN SPEED TH O V W SPEED								,											
THE RESERVENCY OF THE RESERVENCY AS SPEED THE USE NAME FIT. 1 65 127 47 60 1270 124 63 22 36 30.5 230 159 47 109 2 62 127 50 55 16.3 117 54 21 36 25.5 210 147 45 105 3 66 151 113 59 23.6 140 102 24 95 50.7 211 196 56 181 4 75 147 104 57 23.1 171 102 24 95 50.7 211 196 56 181 5 18 18 18 18 56 25.1 193 101 22 33 34 47.4 287 168 71 171								COMM	1 4 1 1 4 1		DAND DE	01.41	5						
19 E 55 127 45 60 17.0 124 63 22 36 30.5 230 159 97 109 2 5.5 14.5 14.5 15.5 15.5 15.5 15.5 15.5				*				UURIER			5		SINE	A V F	113				
65 126 43 60 17.0 129 63 22 36 36.5 230 159 47 109 64 147 50 55 16.3 117 53 21 36 26.5 210 147 45 105 66 151 113 59 73.6 140 102 24 95 50.7 211 196 56 181 65 146 106 57 23.1 171 102 73 98 41.3 262 179 59 173 65 178 175 175 175 100 77 73 78 41.4 287 168 71 171	110			,	41	1	0	>		PEEU	1.1	D	>		9	ī			
74 12, 50 55 16.4 117 54 21 36 26.5 210 147 45 105 105 105 105 105 105 105 105 105 10	110	999	427		¢	17.11	124	4.3	33	\$ 8	30.5	230	651	47	601	35.6			
** 151 113 59 23.6 140 102 24 95 30.7 211 186 56 181 ** 14c 10c 57 23.1 171 102 73 98 41.3 262 179 59 173 118 105 115 50 25.1 193 100 72 93 47.4 287 168 71 171	-	7.7	140		5	16.3	1117	5.4	2.1	3.6	5.6.5	017	147	5 6	105	32.6			
12 145 145 50 25.1 193 101 22 33 47.4 287 16H 71 171			151		5	73.6	7	707	1.7	5.5	30.1	711	186	40		32.2			
171 17 50 75-1 173 101 77 73 47-4 267 168 71 171	* .	n .	1 4.4		n.	73.1	171	705	23	a c	41.3	797	179	0.	173	40.7			
						1.67			, ,			107	-	1,					

5:10:	: 15			۵	5.6	34	4.5		38				4.5	58	31	35	38	B.																	
START TIME	u n			1 H	36	133.2	37	26	54				I	136.7	135.1	135.9	133.7	132.0																	
STAI	END		F11	SPEED	472	299	514	536	536			1.1	SP			525						,	•	0	2					3		. ~	2	1	
06 OH			NAVE F	3	9-	-37	-29	-	13			WAVE F	3	9-	-20	-23	- 1 8	-15							,							9.2	_	_	
w			SINE	>	344	404	367	305	274			SINE	>	344	374	372	356	341		F.1.1	SPEED		101	31	47	1.0		F 1.1	SPE			14			
INFORC				>	-323	-433	-337	-373	7 1 7 1				>	- 123	- 374	-361	-364	-373		MAVE	3	-	20	16	28	131		EMAVE	x	-	- (20	54	00	
0115 A			-	30	-	26	01	4.5	7			-	30	4	200	17	23	2.7	5110	SINE	>		0 0	0 a	246	173	SN	SINE	>	2.8			129	139	
9 /		s		20	~	4.5	27	43	4.5				20	2.1	12	30	33	35	VIATIONS	_	-	, ,	5 7	108	120	111	DEVIATION	_	=	23	6.3	0 0	0	112	:
9/18/7		E MEANS	CIENTS	ī	33.3	130.4	34.3	128.3	117.4		E MEANS	CIENTS	1			132.8	31.	29.	ANDAHD DE	10	2			15.2	38.3	36.0	0	1.5	1		3 • 1	1.	5.0	2 3 . 4	
440		IE MINUTE	COEFFIC	Chich	347				339		CUMULATIVE MEAN	COEFFIC	0		195	2 2 4	5 4	376	E 5.1	FFICIENTS	0	J.	£ 6	e a	109	9.3	VE STANDAR	FFICIENT	0	מו בר מו	43	7 9	0 0	1 0	n n
5		ONE	OURIER (4		0 0		22		00	UHIER	3			7 - 7		20	E MINUT	R COEF		t	31	25	26	25	CUMULATIVE	¥ C0E	,		3.1	42	10	30	
าพ จพา			100	,	> 10°	230		707	173			101			151	563	350	235	NO	FOURTE		>	3.1	7.3	190	154	3	FOURTE		>	31	53	0	501	113
TINE			į		0 -	007	575	1200	642-					5	50	-293	23	-268)	3.6	77	96	0		-		2	3.5	59	7.2	0 0	E D
01154			-		Ξ.		123.2	132.1	151.0			-		Ξ.	134.8	129.4	0.051	137.6		-		I	9.3	24.0	25.4	32.7						18.4			,
CVA					Last .	x	t	7	175					SPEED	£ 90 7	533	233	534				SFEED	3	157	5	117				PEED	~	116	0	*	0
			PEAKS		*	2 +	147	11	15			Praks		*	4.5	5 6	76	~ -		9 × 4		•	3.1	123	. 0	5		PF 47 S		ř.		105	•	0	er.
	3.				>	340	340	356	362					>	340	340	144	362				>	5.7	111	9 5	. 6				•				-	-
	J = -				5	+		OF IN	1771						+	00	T	9 7					5.9	115	3 (214				0	6.5	101	(2)	123	*
	m£16H				z E	-	7	3	T II					H17.	-	2		≠ ∽ B = 81				11 11.	-	2	m :	r sr				M I II		2	~	7	5

	5:15:			SP	0	0	0	0	0.7		SP	0	0	0	0	0,															
	START TIME			ī	0.	0.	•	0	129.4		ī	0.	0	0.	0.	129.4															
90.			F 1 T	SPEED	0	0	0	0	675	1	SPEED	0	0	0	0	675				0	0	0	0	•				0	0 0	0	
HO			WAVE FIT	3	0	0	0 (0	0	A V E FIT	3	0	0	0	0	4			I	•	•	•	•	Ė				•	• •	•	-
CE			SINE				0			SINE			0					F 1.1	SPEED	0	0	0	0	2	-	2330	27 550	0 0	00	0	54
AIRFORCE)	0	0	0	0	-5-		D	0	0	0	0	-511		WAVE	3	0	0	0	0	\$	Y A Y				00		
0115			-	30	0	0	0	0	73	-	30	0	0	0	0	7.3	so Z	SINE	>	0	0	0	D	·	SINE	3		5 0	00	0	1 42
		S		20	0	0	0	0	87		20	0	0	0	0	87	VIATIO		>	0	0	0	0	ω r		13	0	0 0	00	0	3
9/18/76		ONE MINUTE MEANS	1ENTS	ĭ	0.	0.	0.		131.8	CUMULATIVE MEANS R COEFFICIENTS	H	0.	0.	٥.	3.	131.8	STANDARD DEVIATIONS	1 5	Ŧ	0.	٥.	0.	0.	-	CIE, TS I	2		0.		0.	11.6
VAU		NE MINU	FOURIER COEFFICIENTS				0			UMULATIVE MEA COEFFICIENTS	SPEED							COEFFICIENT	SPEED	0	0	0	0			2	37.550	0 0	00	0	20
U		0	1158				0			FOURIER			0				HINUTE	COEF					0	2	RIER COEFF	,		0 0	0 0	0	10
1 14 611			1004	>	0	-	0	0	269	F 0.0	>	0	0	0	()	268	UNE	FOURTER	>	0	0	0	0		FOURTER	3			0 0	0	5.3
11116				n	ח	כ	0	٦	-306		D	0	0	0	0	-306)	0	0	0	0	;	u	-	3	0 0	0 0	0	76
01154			-	т.	0.	0.	0.	0.	133.9	-			0.					.:	Ŧ.	0.	0.	0.	0.		-	2		0.	0.0	0.	91.5
VAD				SPLEU	0	0	0	0	355		SPEEU		0	0	0	355			ELU.	0	0	0	0				27 5 5 5 5		00	0	
			PEAKS	¢	0	0	0		234	S X X S	r		0		0	738		PEAKS	345 %						PE A X S	,					11
	•		2	>	0	0	3	0	011	ŭ.	>		0		0	110		(a.	>		0	0		0.5							7.30
				5	- 1	0	2		-104					0		* 01 L)			0		=							
	ME 1 GH			z E	-	7	9	3	0		NIN		7	T	3.	un -82			н1и	200	P4	m	ž	n		1		-	7	7	sin.

	5:15: 0				•									•	•	•																			
	4			SP	36	9	'n	~	3			9	-	ř	ř	ň :	35	,																	
	START TIME			I	140.8		32.	25.	32.			1	-	40	38.	36.	134.2	,																	
	STA			EED	537	531	161	245	435			-		~	7	N	525	1																	
.04 OH			WAVE FIT	SP	-21						WAVE FIT	3	n	-21	- 52	-	51-					H	5.9	9.5	-	30.6				ī	5.9	7.8			6.41
I 3			SINE WA	>	7 - 7	377	327	224	287		SINE W	>	•	- 1		•	343	1		111		PE	09	35	9 1	176			111	9	09	00 c	7 0	3 2	0,
AIMFORCE				כ	337	63	19	90	1.2					37	7	53	364	1		AVE		2	æ	~ .	` ;	5 7			AVE	8	8	9 !	9 0		30
			_		•	'	•	•	•		_			•	•	•	• •																		~
0115				30	52	24	61	35	3.6			•	2	52	54	23	250	•	5 110	218		>	5.5	67	2.5	272		S	SINE	>	5.5	6.1	9	*	13
76		5		20	30	39	8 -	58	36				77	30	34	50	50	2	VIATION	-		D	62	9	23	235	3	DEVIATIONS		0	6.2	62	5.8	113	108
9/18/7		TE MEAN	CLENTS	I	139.4	137.2	14	.,	(4	EMEANS	CIENTS		_	3 6	38	35	134.9	7	DAND DE	ún		H.	0.11	16.8	0.01	13.3			S	ĭ	11.0	13.4	12.8	15.7	14.5
VAU		MINUTE	DEFFIC	E 0	375					UMULATIVE	EFFIC		EED	375	388	393	393		STANDAR	-		EED	5.5	20	32	1.		STAUDARD	CIENT	033	5.5	5.2	4.5	2	5
10		340	R COE	S						CUMUL	R C08		2						NUTE	111111		S P	4	7	9	œ o			EFFICIE	3.5	4	0	00 i	,	_
- 1			UR 1E	3.	22	7	2(2		UR1E		*	7	3	2	23	7	Σ	200	,	*	3		2	200	1	UMULATIVE	H COE	*	~	~	7	~	-
D N I			10.4	>	277	287	553	552	195		F 0 1		>	-	00	-	597	n	DIVE	31,400		>	0.4	86	53	63		000	FOURTE	>	6.4	29	0.9	5	7 8
TIME				0	-243	-261	-308	-248	-276)	-243	-252	- 593	-273			•)	8.2	æ	£	0 -				0	85	8.2	7.7	0.8	11
01154			-		152.3	140.1	3.8	36	29		-		I	152.3	146.7	1	142.4			-		ĭ	16.6	4.5	13.0	17.0			-	11					
VAD				G.	n	566	513	525	463				SPLED	555	260	542	7.5	275				الد العا		5.	9.6	29	:			PEEU	1	5.3	o C	0	16
			AK S	5		5.3	1-4	30			AK S			0.5	2.	-	7	ř		5 4 9		× S.	47	53	5.4	T 0			N × 0	5	47	œ m	0.0	L (m)	9
			7		0	~	7	5	n		4			0	7	1	5	4		ā	1		0	9	9	0 0			<u>.</u>			7.1	2	in a	, ·
	43.			•	4	5	37	30	3.13				>	0 7	4.5	7.6	4.1	7				>	0	7	UT.	= :				×		1		E.	-
	4 1 HS			7	-250	-362	-330	198 -	-340				-	057-	-301	+313	-321	675				5	159	9.0	00	121				7	187	130	N.	-	
	HE 15			Σ.		2	0	3	5				215	-	7	~	B	n -8:	3			7. I H		2	7	7				E		2	3	*	d)

5:20: 0 5:25: 0			10	0	c	, (0	0	D			a S		0 (0	0 (20																		
START TIME END TIME			-	•	0.		- 1	9.151	•			ī		0.	•	•	151.6																		
EN	-1		STEED	0	C	0 0	- 1	443	0		F 1.7	SPEED		0	0	0	4 4																		
	MAVE FIT	3		0	0	C		5	0		WAVE	3		0 0	7	7 :	134				Ξ.	0.	0.	•	•					I	0.	0.	0.	0.	*
	SINE	>		0	0			3 5	0		SINE	>	-	0 0	o :	•	434		111		4	0	0	0	o o				- 1 -	PEE	0	0	0	0	
		1	0	c	5		1	- 234	D			5		0 0	0 0	,	-234		WAVE		S	0	0	0	00				FAVE	*	Ö	0	0	0	,
	-		20	0	0		0	0 0	>		-	30		0 0	o :	٥,	0 00	5	SINE		>	0	0 :	0	0 0				SINE	>	0	0	0	0	
10			0	C	0		0 0	x	5			20		0 6) i	۵ د	0 0	DEVIATIONS			>	0	0	0	00	,	PEVIATIONS			>	0	0	0	0	
E AE AN	ENTS	1		0.	0.			1.50	•	MEANS	ENTS	Ξ.		•	•		53.1		-	,	I		•		• •				-	ī	0.	0.	0.	0.	
ONE MINUTE MEANS	COEFFICIENTS		2	0	0	0		337	5	CUMULATIVE	COEFFICIENTS	0		o :	0 0	٠ د	339	STANDARD	FICIENTS		O I	0	0	> 0	00		STALOARD		FICIENTS	Sail	0	0	0	0	
ONE	0:	U	2	0	0					CUMU	œ	SPE		D 0	D 6	٠,	, ,	MINUTE	COEFFI	,	n	0		0 0	0 0		ULATIVE		1 4 4 0 0	3 P.E	C	0			
	FOURIE	,		0	0		0 0	205	=		FOURIE	>		0 0		0	302	ONE	OURTER		>	0	0	51	- 0		JOHO		004154	>	0	0	0	0	
		=		0	0	0	1	751-	0			כ				2 0	-152		P 0		,	D	0 0	0 0	00					0	0	0	0	0	
	-			•	0			13.1	•		-	ĭ				٥.,	113.7		.:			0.	0		0.0				-	111	0.	0.	0.	0.	
		0 0 0 0 0	2	2	10							SPEEU		5 5	0 0		374 1				7	5		5 5	00					6.0		=	0	2	
	FEAK S	Ü		0				117	2		EAKS	35		0 0		3	7117		4 5	4				5 5				-	D × 2	* SPE					
	-	>		0	0			200			ď.	>		5 5	3		051		9.6										al a	>			3 ,	0	
*								1 + 5 -	5			0		5 3	0 0	7	-341						3 3		5 3					2		0			
Mt.1641		m I so		-	7			- 3				× = =		-	4	7 3	ь. В -						7	9 3						2 T E	-	2	-	T	

5:20: 0		SP	53	*	**	4.7	4.5				SP	53	0 7			4 4																
START TIME END TIME		Ŧ	56.	31.	35	46.3	142.2				ī	156.0	4	141		142.4																
HD 90.	WAVE FIT	SPE	89	5	4		-22 547		i	AVE FIT	SPEE	8 53	53			- 28 551				Ξ.	• ,	9.71		3.8				Ŧ	41.0	32.7	26.5	23.1
A .	SINE W	>	00	S	10	10	431			SINE	>	181	340	000	100	405			F11	SPEED	7 (4 2	4 6	2.9			-	SPEED	J J	70	9	65
AIRFORG		=	21	10	, ,		-334				0	2210	700	2 17	7 . 5	- 326	•		WAVE		9 :	11	2 0	8 -			A A	ţ	91	7	2.1	24
0115	-	2	22	20	300	000	52			-	30	22	1 1	0 7	17	27		3115	SINE	>	09	122	0 1	0 4	•	,	SINE	>	09	0	0 1	8 2
9 2 5		20	7		0 3	2 .	28				20	3		0 .	7	- 0	;	VIATION		2	341	00 1	7 7	0 7	2 C		-	כ	341	266	216	170
T VAD 9718/7	CIENTS	1	150.2	132.1	134.0	0	139.7	ME MEANS		ICIENTS	I	150.2	2.001	0.21	0.15	2.1.1	:	ANDARD DE	1 51	I	-	7.	: ,	9 00)	1.5	Ħ	41.5	32.0	55.4	22.8
VAU	COEFFIC	112303		0 0	177	7	417	CUMULATIVE		COEFF 10	Spero	1 0	0 0	00	, ,	4 4	2	NUTE STA	FICIEN	SPEED	0 7	9 1	7	0 7 6	9		FICIEN	OBBAS	9+	101	7 00	75
_	а ш	,	2 4 5	91	0 0	7 1	2 - 2	ð		UKIER	3	, ,	07	77	5.4	್ಟ್		Σ	R COEF	r	37	7	3.7	27	V		M COEF	τ	3.7	60	3.7	34
N 64	100	2	3 + 1	107	197	340	31+			104	>		197	0/7	167	301	505	OME	FOURTE	>	6	1 1 2	2.0	5 2			FOURIE	>	6 3	66	6.8	8 2 7 4 7
1 I ME		:	0 0	000	308	- 278	-267				=	١.	P 1	N.	+	947-	n)	532	126	93	2 0 0	1)	235	200	163	145
01154	-			75	7	33	132.7			-	1				5.	43.4	:		-	ī	35.8	4.7	15.5	0 0	•			Ĭ.	35.8	26.2	23.5	20.6
C A Y			SPEED	196	5/5	0007	573				-	d .	37	0	(2)	285	TO CE			P E	15	7 60	5	0.0				SPEED	^	14	24	63
	PEAKS					D	123			PEAKS	,		11	+	11	à c	c x		PEAKS					0 7			PEARS	τ	-	5.0	4.0	5.0
÷				4 .	1 0 1	347	345				.73		0 -	437	724	430	17,			>	109	76	100	1001				*	601	100	66	16
			0 1	53	33	7	-325				-	0	-238	-280	-339	-336	-356			0	300	14	38	7 7				5	300	223	507	178
НЕ 15н1			2 .	-	2	7	ទ ហ				-		-	7	•	B	n -8	5		NIN	-	7	~	J J	,			2			20	70

	5:25: 0			SP	0	0	20	0	32			9	,	0 ;	2 .	77	56																	
	START TIME			ĭ	0.	138.2	190.8	0.	141.3			2	: '	0.00	138.2	173.3	160.5																	
HD 90.	ST		WAVE FIT	SPEE		51	-107 357		7		WAVE FIT	5	'n				-73 409				Ŧ	0.	0.	0.09	0.	n • r			111	0•	0.	52.2	52.5	τ.
			SINE	>	0	381	27.1	0	325		SINE	>		0	181	308	315			F17	SPEED	0		142	0	67		111	SPEED	0	0	36	50	-
AIRFORCE				D	0	-340	-16	0	-239			-	0	0	0 + 5 -	.71-	-170			WAVE	3	0	0	169	0 0	c c		MAVE	3	0		131	131	1 .
0115			-	30	0	5.8	99	0	8		-	;	30	0	2.9	6.9	70		0 10 5	SINE	>	0	0	167	0	<u>e</u>	SNO	SINE	>	0	0	134	L	\sim
176		571		20	0	19	7.8	0	99	s			0.7	0	19		9 2		DEVIATIONS	_	5	0	0	314	0	,	DEVIATIONS	-	ר	0	0	291	291	215
9/18/76		TE MEANS	IENTS	ĭ	0.	136.3	140.9		128.2	E MEANS	1ENTS			0	136.3		138.		ANDARD U	S	Ę	0.	0.	16.9	0.	;	DARD DE	5	ī	٠.		0.57	0.,1	13.5
V A U		ONE MINUTE	FOURTER CUEFFICIENTS	SPEED	0	398	339	0	384	CUMULATIVE	COEFFICIENT		SPEED	0	338	35.4	35.4	,	5	OEFFICIEN ¹	SPEED	0	0	53	0	2	E STANDARD	FFICIEN	SPEEU	0	0	50	20	7.5
10 11		0	HIEH	t	0	=	S	0	1	Ð	FOURTER			0	-				MINUTE	R COEF	3	C	0	2	0	`	CUMULATIVE	R COEF	*	0	C	5 :	7	,
11. 64			F01	>	0	287	188	0	237		104		>	0	281	288	288		ONE	FOURTE	>	0	C	96	0	•	CUM	FOURTE	>	0	0	99	6.9	2.4
11146				D	O	-274	191-	0	-301				0	0	-274	-201	-201)	0	0	53	D	e e			D	0	0	16	76	14
01154			-	ī	0.	146.7	170.1	0.	136.0		-		I	0.	146.7	162.3	162.3			-	ī	0.	0.	40.2	0.	24.		-	T.	0.	0.	31.5	31.5	29.3
VAD				SPEED	D	392	373	0	076				SPEEU	0	345	383	303	,			SPEEU	0	0	101	0	152			SPELD	0	0	7.5	7.5	7
			FEAKS		0	567	7.0	0	-83		FEAKS		*	7	542	129	2 2 2 2			F A K S	•	0		125	0	133		PEARS	*	0	0	134	1.34	7 4
	28.			>	Э	328	342	0	311				>	0	328	3.24	324				>	0	0	7	0	730					0	3.1	3.1	111
	#			5	D	+17-	06-	3	+52+				0	0	+12-	-131	131				0	0	0	267	0	7.4					0	20.2	207	150
	1 HE I GH			Z I E	-	7	*	+	u)				211	-	7		<i>y</i> (1				11 174	-	7	F	7	n			E E		2	40	7	r
																1	5 -	86																

۰ ٫

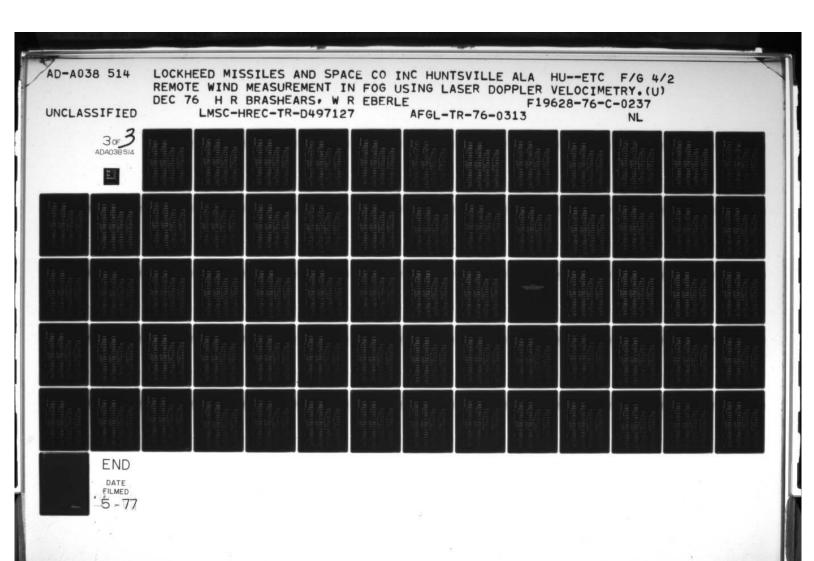
	5;25; 0 5;30; 0			SP	36	7	3.	75				SP	3.4	0 0	34	37 8	;																	
	START TIME			I :			•	136.4				ı	3	36	37	138.0																		
.04	E S T	111	2	1 0	0	0	0 -	513		F11		SPEED	584	547	260	548																		
O H		WAVE	3	3 0	7-	1 1 2	1	-13		WAVE		I	-24	6 1 -	-24	-21					I	0.9	8.9	3.4	10.5					ĭ	9	7.7	6.7	7.7
RCE		SINE	>		27.5	454	378	367		SINE		>	904	393	412	403			111		SPEED	6 5	54	45	54	3			F11	PEE	3	7 0	- 6	57
AIRFOR			17	, -	- 227	37	1 340	-351				>	-415	37	-374	-365			F A V E			15	œ	58	13	2			WAVE F	3	S	6.1	50	0 0
0115		Ī	30	J	-	2.5	œ	1 5		-		3.0	7	28	27	23		NS	SINE		>	0.9	33	20	# 4 % W				SINE	>	0.9	0.5	9 :	5 2
176	NS		20	7	9	31	53	27			6	0,	7	30	30	30		DEVIATIONS			0	2.0	90	87	74		SMOLTALV			2	20	19	90	7.1
9/18/76	ONE MINUTE MEANS	FFICIENTS	I	26.	37.	138.2	35.	34.	E MEANS	FF ICIENTS .	1	- ;	. 97	3	33.	134.0		ANDARD DE	S I		- 0	•	5.71	· ·	7 · 0		ARD UEV			H .	1.6	9.1.		10.3
VAD	NE MIN	COEFFI	SPEED	0 7 7	425	4.45	398	397	CUMULATIVE	0	00000	1 :	0 7	433	437	426		E 51	FICIENT	2		~ :	9 0	2	0 0 0 0		STAID		CIENT	PEEU	5 4	- :	0 -	5.7
GMT CT	0	RIER	3	53	23	4 6	31	33	CO	OURIER C		0	,	97	35	32		MINUT	COEFF	3		77	- 3		21		CUMULATIVE		005661	5	22	20	2.8	5.4
<u>z</u>		F00	>	255	302	330	278	278		F00	>	25.5		117		287		ONE	DURIER	>			200	2 0	7.0		CUMUL		OURIER	>	57	53	5.5	15
TIME			כ	35	2 B	167-	17	5.7			Þ	5		7 -		-298			•	٥	7	0	20	7.0	5.7					0		2 - 1	7.3	2.0
01154			H	130.9	30.	34	. 7 ,	132.5		-	ŗ	130.9	0.0			134.2			-	I	4.6	7	16.5	10.3	00				-		D .	0.4	11.2	12.6
V A D			SPEED	100	7	£ :	7	*7			1416	E		-	4	200				44		4.5	x x	7	19					ELU		0 0	19	un - 9
		PEAKS	ż	0	r .	1.5	C :			4		1.5	1.5	4.5	ď	Н			PEARS	35	76	15	10.8	てす	*			FAK'S		35	7.1	/ 4	18	T.
* * * * * * * * * * * * * * * * * * * *			>	1994	350		70.				>	384	368	341	465	387					5.0	*	171	-	15.5			G.,			6.0	100	103	711
1647 =			5	95	0 0 0	-127	742					100	27	9 5	6 5	Œ m					3.6	29	9.9	10	o- co) f	5.0	2.6	7.1	7.4
71.16			2 .		4 1	7 3					M.I.M.	-	7			n -87	7			MIN	1	7	-85	7	.n					210	2	77)	0	n

	5:30: 0			SP	7	0	27	20				SP	-	7	32	26	36																	
	ART TIME D TIME		,	- :	•	•	30.	135.3				ĭ	8	. 80	23.	129.3	-																	
.04	END	F 1.T	1	מו בר	971		4.0	3 419		F17		SPEE	126	126	75	634	n					5	0	7	r 7									
9		WAVE	7		•		-2			MAVE		3	405	405	116	20					H	•	•	20.					,	-	. 7 5	42.		20.
RCE		SINE	>	100	-		0 1	223		SINE		>	199	199	694	4 - 4			111		SPEEU	34	0	38	176			F11	O J J d S		1347	1347	771	459
AIRFOR			=	0 0		,	9 1	-227				>	8 9	89	54	1 3 7 5	,		MAVE		•	722	0	1.	206			MAVE	2		~ (~ 0		262
0115		-	90	0		0 0	000	50		-	,	30	9.5	65	4	4 4		SNO	SINE		>	1220	0	000	203		2	SINE	>	1330	0771	077	414	3 7 6
8/76	SNI		20	75		,	0 0	5.4	S		6	0.7	1.5	75	19	5.7		EVIATIO			>	822	0	134	281		EVIALION		٥	H 2.2	4 5 0	770	334	327
9/18/7	MINUTE MEAN	CIENTS	I	101.2		0	7 2	138.3	E MEAN	FICIENTS	1		101.2	101.2	4.4.	131.1		ANDARD DE	S		Ξ		• (7.6	3	2	2	11	1		• •		24.42
UAV T	ONE MIN	COEFFICIENT	i.	3			- 0	403	CUMULATIVE	COEFFIC	0 0 0	: له د ل	7	7 0	396	396		E 51	FICIENT		SPEED	2	0 -	9 1	132		314104	TCIENT	0		220	4-1	9 8	100
0		URIER	š	25	0	1	2 3	0	00	11 58	3		57	52	2 .	2 5		HINUT	0.00			-	3 0		0	2 1 1 0		COEFF	3	-	0	2.1	17	н
E 11. 6M		100	>	157	0	214	265	272		FOUR	>		n.	0 0	- 1	244		ONE	OURTER		> 0	100	0 0	2.0	3	DO TT A THE MILE		OURIER	>	10	x	189	in	m
TIME			D	-341	0	28	-251	-276			ח	776-	1 7 7	7 0 7	-274	-276			•		-		123	99	172				5	110	110	112	0 1	119
07154		-	H	165.7	0.	30.	121.2	74.		1	r	4	2 4	142.2	14	145.9			-	7	33 0		21.1	24.4	7 .			-	Ŧ	73.4	73.4	41.0	34.0	41.9
VAD			SPLED	4	0	~	470	613			144	7	3 4	2.5	Y =	1"				-	Li Li	0.0	50	7.1	140				ELD	0.5	0.5	67	19	113
		FEAKS	ı	45	0	21	17	15		PEAKS		in	3	58	0.5	20			PEAKS	3			5.6	19	7.3			F A M S	5	9	0	4.5	99	99
28.			>	7+5	0	302	242	564			>	341	7 + 1	315	281	145				>	100		9.0	181	0			1		30	9	104	2 1	00
# LH5			0	15-	5	568-	-365	,				Un	15	-284	C	22				-	29.0		186	9	3 6 6				5	565	700	350	543	326
HE IS			2 E		7	1	5	v.			1111	-	7	~		.s - 8	38			2 1 2		7	*1	7	n				HIN	-	,	-		n

	35: 0				4.		. 0	3	_					41		. 0-	•	•																	
	5 5			8	, 3	-	, 0	7	,				9	, 1	. 1	. 1	S	S																	
	START TIME			1	127.8	138.6	115.6	128.3	152.1				1	127.8	133.2	126.7	127.1	131.9																	
0.			F17	v)							F11	200	2 4 0	266	532	529	531																	
6 OH			WAVE	*	-	-17	-2	7	7			WAVE	3	-	1	٥	9-	5-				I :	-		41.0	24.5				ī		- 6 - 1	16.9	23.8	55.6
CE			SINE	>	329	436	208	301	445			SINE	>	329	383	318	314	339		F11	- 1	SPEED	75	5.4	116	20			F11	SPEED	5.2	9	67	19	74
AIRFORCE				O	-421	~	104-	~	~				0	-421	101-	-401	-378	-350		WAVE			17	, ,	=	æ_			WAVE		2.1	23	5.0	6	œ
0115			-	30	2.1	13	56	32	œ —			-	30	2.1	17	20	23	22	511	SINE	:	> .	671	153	295	113	U	n	SINE	>	123	109	151	188	8 -
911		57		20	54	17	61	- 2	52				20	54	2.1	20	6 1	20	EVIATIONS		:	0 6	u 1	4 00	691	661		201		>	15	62	9 9	101	134
9/18/7		UTE MEAN	CIENTS	ī	122.5	136.4	112.3	125.3	4 8 • S	VE MEANS		CIENTS	ī	22.	29.	123.2	23.	28.	ANDARD DE	NTS I			7.5	17.8	41.0	27.9			1 5	H	13.9	12.9	16.7	23.7	76.0
VAD		ONE MINUTE	COEFF	SPEEU	425	477	403	\ t t	45.6	CUMULATIVE		COEFFI	SPEED	425	451	433	437	0 7 7	E 51	OEFFICIENT	0 1 0 0	_	0 3	67	139	67	0		TUBENT	PEE	63	5.8	4.9	3.5	-
GMI CT		0	DURIER	7	34	53	0 '	-	r r	0.0		¥		34	3.1	61	13	0	MINUT	U			22	1.2	0	5 -	TA III		COEFF	3	-	17	7.5	23	13
2			FOL	>	234	345	162	+ 57	350			F004	>	234	590	643	542	564	ONE	OURTER	7			128	277	126	1		OURIER	>	=	104	127		6
TIME				٥	-344	-323	-352	197	/17				٥	+ 3 + +	-333	340	-322	-305-		•	-	2	37	4.2	143	00			u	٥	52	3.2	36	080	711
01154			-	ĭ	135.5		137.2					-	ī	135.5	136.7	136.9	137.6	131.1			ı	10.4	11.6	11.2	45.4	15.6			-	π	10.6	10.7	9.01	22.7	
VAD				ial.	578	0	y -	- 1					tail.	57B	0	~ .	0 .	D.			0.5	9	88	53	0	0				EED	49	0 0	7	27	0
			FEAKS		28	37	3.7	7 -	n n		V 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2		28	33	35	35	C C		PEAKS	8	36	5.2	36	45	ē			EAKS	₹ 5	36	4.0		7 7	
	43.			>	404	0 5 5	2 4 5	10.7					>	60+	452	7 1 5	707	2			>	100	19	14	657	131			ū.	•	100	10 1	- 3	7 7	
	н 			D	966-	705-	0 0 0 0	- 346					D.	-396	568-	-38/	1001	2	•		0	11	901	47	265	0				0	11	r c		7 7 7	
	nE I Gu I			z E	-	4 "	7 3	J					2 1 4		4 .						2 1	-	7	۴:	* J	N				215		7 -	, ,	r ut	
																B	-	89																	

5:35: 0 5:40: 0			8 2 2 2 8 8 4 4 8 8 4 4 9 8 9 4 1 8 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			00 7 7 7 50 01 7 7 7 70 01						
START TIME END TIME			11 135.8 143.3 149.7			138.8 138.8 138.8 141.9						
• 0 •		WAVE FIT	26 567 1 -26 567 1 0 0 0 17 544 1 -30 518 1		WAVE FIT	SPEED -367 -32 552 -32 552 -32 552 -28 549 -29 540			27.6 18.7 .0 2.7 2.7 29.9			7H 27.6 23.6
01		SINE WA	381 406 470 369		SINE WA	381 391 391 414 400		FIT	PEEU 85 29 0 83 78		F11	SPEEU 85 68
AINFORCE		S	0 -347 -302 -273		O1	-347 -329 -329 -313		MAVE	3 2 2 2 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		WAVEF	3 2 3 3
0715 A1		-	30 47 38 63 53		-	0 1 1 1 1 1 1 V	2110	SINE	229 92 94 95	is.	SINE	22.9
	S		20 50 62 0 0 41			20 50 55 55 55	DEVIATIO		7 1 C 7 C 7 C 7 C 7 C 7 C 7 C 7 C 7 C 7	RD DEVIATIONS		143
/18/	MEAN	ENTS	143.4 144.5 147.7 142.7	MEANS	ENTS	143.4 143.9 145.0	0	S	28.0 17.3 .0 10.0 23.8	ARD UE	2	7H 2A.0 23.1
> Q	ONE MINUTE	COEFFICIENT	370 1 375 1 0 440 1 379 1	UMULATIVE	COEFFICIENT	PEEU 370 372 372 392	E STANDAR	ICIENTS	PEE0 91 85 0 74	STANDA	FICIENT	SPEEU 91 84
	0 10	DUNIEH CO	20 20 33 00 00 00 00 00 00 00 00 00 00 00 00	200	E R	3 2 0	MINUT	R COEFF	4 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ULATIVE	R COEFF	* = ±
25 21		100	293 293 367 262		FOUR	275 275 275 302 290	ONE	FOURTER	> 7 6 7 6 9 7 4 9 5 7 4 9 5 7 4 9 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	CUM	FOURTER	, t 126
11 HE			-206 -211 -233 -243			-206 -208 -208 -215 -215			145 107 107 79 176			145
01154			TH 187.7 128.2 .U .U 132.8		-	187.7 163.9 163.9 155.0		-	31.5		-	31.5
04			524 524 524 610			575 575 555 555 555 527			5FEEU 66 31 120 178			SPEED
		PLAKS	3 X X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		PEAKS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		PEAKS	4 55 62 65 65 65 65 65 65 65 65 65 65 65 65 65		F. E. A. W. T.	. 33
28.		1	* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			5 0 1 4 2 7 4 2 7 4 0 1 3 8 4			1113 0 4 4 0 7 5 1 7 3			
*			1320			2 2 4 4 5 E 2 2 2 2 2 2 3 2 4 4 5 E 2 3 2 4 5 E 2 5 E			5 4 5 7 5			
HE 1.5H			2 - N - F 5			E-3015 B-9			=			

5 2 2 2 3 3



<u>.</u>	,																																
5:35:	n		SP	30	39	31	15	7				SP	30	34	33	3.8	36																
START TIME	<u> </u>		ĭ	139.6	136.9	140.5	151.2	132.1				Ŧ	139.6	138.3	139.0	142.3	1.0.1																
STA S	2	=	SPEED	260	532	553	527	244				SPEED	240	547	549	543	543																
HD 90		WAVE FIT		-26	0-	-20	0	-13		WAVE FIT			-26	81-	-10	91-	9-			Ī			2 -	36.7	4.2			ī	3.7	4.5	7	19.2	17.8
u S		SINE	>	425	388	427	386	363		SINE		>	425	408	7 7	404	398		F11	SPEED		70	280	80	46		-	SPEED	52	55	30	09	2.7
AIRFORCE				-362								n	-362	-361	-357	- 125	-340		WAVE	3	: -	2 :	22	24	2.1		MAVE	3	01	5	1.7	6-	6
0115		-		15								30	15	61	16	8	8	5110	SINE	>		,	5 3	15.6	40	SNI	SINE	>	07	5.5	5.5	89	e G
911	SZ		30	1.7	22	7	27	27	S			20	17	1 9	1.7	20	2.7	DEVIATIONS	_	3	9 5		2 - 2	260	4	VIATIO	-	>	4	*	37	142	3
9/18/16	ONE MINUTE MEANS	IENTS	I	135.2	134.4	138.2	149.5	132.4	CUMULATIVE MEANS	ENTS		Ŧ	135.2	134.8	135.9	139.5	138.2	UARD D	5	1		n .	0 4	36.5	4.3	CUMULATIVE STA-1DARD DEVIATIONS	5.	Ŧ	3.5	7.0	5.1	19.4	17.7
V A C	E MINU	FUURIER COEFFICIENTS	PEED		413	470	428	424	10LA11V	TOFFFICIENT		SPEED	456	437	1 1 1 1	4 11 3	1 2	MINUTE STANDARD	COEFFICIENTS	03305	-	x	79	5 -	7.5	5 5 TA-10	COEFFICIENT	SPEEU	6	18	19	0.6	18
10 1	0 0	KIER	\$	52	39	39	1.2	39	Ď	FOURTER			15	31	34	28	30							26	17	JLATIVE				75	26	27	74
112 611		F00	>	324	583	350	315	284		100		>	324	308	321	011	314	ONE	OURIER	>		- ·	÷ ÷	- 1	4	CUMU	FOURTER	>	19		2.5	S B	1 8
11116			0	-322	-291	-310	461-	-316				0	-322	-308	-308	-270	-286			=	,	0 '	, ,	210	99			5	7.0	9	20	122	
01154		-	ī	139.0	127.6	145.3	135.5	139.4		-	•	Ξ	139.0	111.8	137.4	0 46	137.4		-	2		4.3	0.01	7 - 7	4.7		-	ĭ	9.1	0	12.3	11.0	
VAD			-	568	529	264	1,45	556				SPEEU	564				2.00			0 3 3 0 3		9	2 0 0		7.3			SPEED	67	24	5.3	6.5	59
		PEAKS	8	09	31	5	7.7	28		5 2 4 3 4			9	47	46		7		PEAKS			31	7 0 0	64	69		PEARS	5	1		3.5	47	5.2
43.			>	422	31.9	455	242	5		•		>	422	115	400		402			3			* *		87			,	5.0	0	-	96	76
			5	- 36 -	515-	+15-	- 17.1	-350				_	- 369		- 365	-34.7	-365					70	2 0	0 00	11			0	06	ď	26	2	o m
HE 1 GH T			2	_								1111	-				- 5							1 3	0			2 12	-		4 m	7	S

5:40: 0		•	33	25	5.6	30	25			SP	33	28	82	29	3															
START TIME SEND TIME S		74			134.0					7.		147.3	141.8	143.3																
	=:	SPEED		414	543	532	526			SPEED	094	435	419	- 6 7					_											
0 4 dH	WAVE FIT	3	-24	-21	-17	-37	- 30		WAVE FIT	3	-24	-22	-20	-24				Ŧ	36.6	18.	24.	22.1				H	36.8	25.7	22.6	26.0
3	SINE	>	344	315	322	450	177		SINE	>	344	327	325	353			F11	SPEED	30	9.5	115	154			F.1.1	SPEED	30	76	000	0 0
AINFORCE		>	-191	-251	-379	-269	7 9 7 1			2	-191	-227	-290	-318			WAVE			4	æ 1	191			WAVE		13	35	2 6	83
0118	-	30	54	47	4.5	34	75		-	30	54	38	-	- ^ - ~		SNO	SINE	>	5.9	99	151	200		15	SINE	>	5.9	62	211	146
. 87		20	20	54	11	25	7.3			20	20	53	63	09		DEVIATIONS		>	597	142	210	140		IATION		,	569	191	2 00	186
T VAD 9/18/76 ONE HINUTE MEANS	FOURIER COEFFICIENTS	ī	156.1	145.9	140.1	145.2	132.9	CUMULATIVE MEANS	CIENTS	ĭ	156.1	150.0	146.2	143.5		STANDARD DE	15 1	Ħ	25.8	16.9	20.2	36.4		STAUDARD DEVIATIONS	1 5	ī	25.8	20.2		23.3
VAD ME HIL	COEFFI	SPEED	380	359	367	413	366	HULATI	COEFFICIENTS	SPEED	380	367	367	378			COEFFICIENTS	SPEED	15	40	122	72		STALL	COEFFICIENTS	SFEED	5	\$ 0	1 0	11
0	RIER		22	•	7	30	-13	ō	DURIER		23	12	0	T T		HINUTE			58	13	- 0	7 9 7		CUMULATIVE				200	22	22
N 64	FOU	>	323	790	157	321	522		F 0 U	>	323	303	282	292		011E	FOURIER	>	16	78	9	176		CUMU	OURIER	>	14	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	. a	103
11 48		o	-132	061-	-236	- 415	-208			ס	-132	-167	961-	-201				2	162	7		152				כ	162		130	131
07154	-	ī	122.3	127.3	134.3	138.4	113.7		-	ī	122.3	125.3	129.0	131.2			-	ī	45.1	25.2	00.	25.3			-	H	45.1	32.2	22.8	23.8
O A >		SPEED			250					SPEED	433	452	480	1 00 0				LEU	20	5.6	-	601				SPEED	5	54	1.6	93
	PEARS		7.3	33	79	117	151		PEAKS		7.3	7.7		200			PEAKS	SP	58	57	9 2	154			PEAKS	5	58	10 to	80	103
28.		>	177	710	356	366	1 2 6			>	127	153	967	312				>	167	183	0 0	143				>	167	178	1.01	170
		ח	-270	- 135	-368	-323	-336			Þ	-270	-303	-333	-332				ס	37	11	T 0	122				ם	37	70	8	7 8
нЕ 16н 1		<u>z</u>	-	2	7:		S.			z	-	7		3 -	92			n I r	-	7	7 :	2				<u>z</u>	-	~ ~	*	5

5:40: 0																														
U1		SP	5.	70	4	42				SP	45	40	40	4 4																
START TIME END TIME		H	131.5	145.7	142.2	149.2				Ŧ	140.1	135.5	138.7	139.5																
	11.	SPEED	478	590	572	530			F1.1	SPEED	555	514	538	246					_	•										
9	WAVE FIT	3 -	9	-16	-16	7			WAVE	3	- 8	-17	-					Ŧ	-	9	25.				F		0	1 6 .	15.5	
SC E	SINE	> =	318	191	439	1 1 0			SINE	>	4 8	364	396	400			FIT	SPEED	28	20	9 - 6	100		111	SPEED	28	9 9	16	8	
AIRFORCE		ם כ	-352	-279	-343	-270				>	-350	-351	-328	-332			WAVE	3	22	7.1	9 6	18		WAVE	3	22	2.1	6 -	207	
0118	-	30	12	8	17	=			-	30	٥	=	6 :	<u> </u>	<i>u</i> 2	2	SINE	>	09	-	209	0	S	SINE	>	9	83	138	130	
\$ 5 S		20		78	28	92				20	1.1	8 7	07	23	011417		-	>	7 6	23	172	108	/1AT10N	_	Þ	46	63	011	==	
T VAD 9/18/76 OHE MINUTE MEANS	SINTE	1 2	127.0	145.8	140.8	150.2	Sudding 1. VE AFANS		IENTS	I	8	N	o,	136.8	ond the training	2		Ŧ	13,3	9.5	29.5	13.0	STANDARU DEVIATIONS	s	I	13.3	11.3	18.7	9.0	
VAD	FOURIER COEFFICIENTS	SPEED	408	493	4 4 6	456	V. T. 4 111		COEFFICIENTS	SPEED	416	434	426	4 t	-	0	COEFFICIENTS	SPEEU	40	43	8 6 7	127	E STAND	OEFFICIENT	SPEED	0.7	53	7.5	ν - υ -	,
0	KIER	3 0	32	9	34	30	Ē	2	OURIER	3	58	30	50	52	7 1 1 1 1 1 E			ŧ	22	17	7.5	21	CUMULATIVE	COEF		22	1 9	20	22	
N 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	FOU	> 25	247	373	331	358			FOU	>	346	292	31.8	329	200	3 10	FOURIER	>	5.3	53	203	104	CUMU	UURIER	>	53	74	131		
1136		U	-321	-239	-574	-217				כ	-315	-317	767-	-717				>	9.6	20	1 4 5	108			כ	9 8	6.5	100	105	
+S110	-	H .	133.3	135,3	157.9	142.0			-	Ŧ	143.9	138.2	13/.3	141.0			-	ī	7.7	7.4	7.22			-	E	7.7	9.1	- u	3.5	
> C 4 >		SPEED	506	620	200	578				SPEED	573	537	263	574				SFELD	3.0	56	25	80			SPEED	30	5	55	- 0	
	PEAKS	3 4	26	1.4	64	7			PEAKS	3	5.1	38	7	51			PEAKS		* *	68	777	107		PEAKS		*	23		1,1	
÷		> 1	3 5 5	463	185	† 2. 4.				,	£2.2	396	507	4 30				,	30	47	7 99	0			,	30	11	971	117	
		2 .	-365	001-	-273	- 352				0	-330	-352	195	-346				n	16	5.4	83	2			٥	16	7.0	- 0	9 9	
HE 1 GHT #		z -	. ~	7	*	J.				=======================================	-	7		-93	3			Z	-	2	7 3	.c			2 .	-	*	~ 3	run	

5:45: 0																															
u			SP	26	11	0	0	0			SP	26	52	52	52	25															
START TIME	ž -		ĭ	165.1	137.5	•	0.	•			Ī	165.1	151.3	151.3	151.3	151.3															
15	Ž		EED	213	514	0	0	0			EED	213	364	364	364	364															
HD 90.		WAVE FIT		5.1						WAVE FIT	W SPE	5.1	; -	-	-	-			i	-	•	•	•	•			Ŧ	•	19.5	19.5	19.5
		SINE	>	708	379	0	0	0		SINE	>	206	293	293	293	293		F17		SPEED	0	a	0	00		F 1.1	SPEED	٥ ;	213	213	213
INFOR			>	-54	-346	0	0	0			>	154	-200	-200	-200	-200		WAVE						00		WAVE		0	70	7.0	7.0
OTIS AIRFORCE		-	30	•	S					-	30	80		63	9		SNS	SINE		> '	0	o :	0 0	00		SINE	>	0	122	122	122
9.2	s		20	11	62	0	0	0			20	11	69	69	69	69	VIATIO			>	0	0	0 0	00	1 A 1 1 0 N		>	0	206	206	206
9/18/76	ONE MINUTE MEANS	TENTS	ī	186.0	134.3		0.	0.	E MEANS	IENTS	ī	186.0	1 . 0 9 1	1.091	1.091	10091	MINUTE STANDARD DEVIATIONS	1.5		<u> </u>	0.	٥.	0 0		CUMULATIVE STANDARD DEVIATIONS		ī	0.	36.6	36.6	36.6
VAD	NE MIN	COEFFICIENT	SPEEU	234	399	0	0	0	CUMULATIVE	COEFFICIENT	SPEED	234	317	317	317	317	TE STAP	COEFFICIENT		SPEED	0	0	0 0	00	E STA	F1C16u	SPEED	0	117	117	1117
5	0	œ		9-	4.	0	0	0	00	FOURIER			17	11	11	11	ON I M	COEF						00	V 1 1 4	COEF			3 4		
TINE IN GHT		FOURTE	>	233	279	0	0	0		FOUR	>	233	256	256	758	757	ONE	OURIER		>	0	0	= 0	00	CUMUL	FOURTER COEFFICIENT	>	0	33	33	33
1146			0	54	-285	0	0	0			ס	24	-130	-130	-130	-130				5	0	ŋ	0 6	00			2	0	219	513	513
07154		-	ĭ	115.5	142.2	0.	0.	0.		-	ī	5.5	128.8	128.8	128.8	128.8		_		1	0.	0.	0.0	0			H	0.	0.0	18.9	18.9
VAD			SPEED	187	679	0	0	0			SPEEU	187	453	453	453	453				SPEED	0	0	> 0	00			SPEED	0	243	243	243
		PEAKS	2	16-	12	0	0	0		PEAKS	*			74-				PEAKS			0	2	0 0	0 0		FEARS	3	0	77	11	11
•		•	>	171	*	0	0	0			>	121	307	307	201	307				>	5	3	D 0	00			,	0	1 0 V	197	564
			5	-253	-385	0	0	3			0	-753	-317	-117	-317	-317				0		0	5 0	0 0			D	0		10	16
нЕ 16нТ			ž	-	2	٦	7	ın			z I u	-	. 7	3		s -94	4			<u>.</u>	-	7	T 3	م. ٦			2 1	-	2 *	, ,	'n

0 : 0																													
5:50:		92	7 7	4.7	7.8			9	67	7	1	7	;																
START TIME END TIME		# 3	1 4 1	135.8	145.8			1	143.3	152.1	148.0	147.5	148.3																
	11.	S			546		=	SPEED	594	563	571	587	579																
H	WAVE FIT	* 1	-125	6	-24		WAVE FIT	3	6	-67	-53	146	4			i	= ;	5.	90 -		15.2			1		40.04	52.3	45.5	•
3	SINE	> 4	232	421	460		SINE	>	475	354	37.1	404	4		F11		SPEED		007	0	165		F17	PEE		154	134	127	
AIRFORCE		0 - 16.2	-362	404-	-353)	-352	-357	-370	-366	-349		WAVE			77	107	35	1		WAVE F	3		153	135	118	
0115	-	30	52	5.6	1 2 6		-	30	*	6	22	23	88	SN	SINE	;	> 0	200	82	67	134	2	SINE	>	0	245	215	202	
45 25		20	1 5	43	5.5			20	52	37	39	37	7	DEVIATIONS		-	, 4	0 4	82	0	153	IATION		2	8	183	163	149	
MINUTE MEANS	CIENTS	1.1.1	128.2	147.3	131.0	CUMULATIVE MEANS	CIENTS	Ŧ	141.7	134.4	138.0	139.2	٠/٢	ANDARD DE	1 51			000	20.00	10.2	21.8	STANDARD DEVIATIONS	1 5.	I	4.9	21.4	19.6	17.7	
u z	FUUHIER CUEFFICIENT	SPEED	447	111	475	106477	COEFFICIENT	SPEEU	445	454	094	468	697	5.1	COEFFICIENT	2	4		09	135	112	STAN	FFICIENT	PEEU		101	16	100	
0 0	HIER	3 %	, 0	51	س ص م	5	DUKIER		56	13	7	E -	<u>.</u>	MINUTE		3		0	25.	37	13	CUMULATIVE	COEFF	5.		3.8	34	35	
ž.	F 0.1	361	287	166	315		100	>	361	324	341	352	c t c	ONE	DURIEH	>	. 7	221	47	101	182	CUMU	UUHIEK	>	6 7	158	140	132	
7 I ME		-288	-296	+57-	-326			ח	-286	-292	-283	-286			•	3	99		101	120	4		ŭ.	0	45	19	6.5	78	
01154	-	151.8	136.4	134.5	143.7		-	ī	51.8	14.1	41.7	141.7				ī	12.3	38.3	6.41	27.5	31.4		:	H.	12.3	26.3	55.5	25.3	
> Q		SPEED	558	4634	537			SPEEU	6U8	543	296	622				SPEED	163	611	32	35	135			SPEED	103	109	15	600	
	PEAKS	z ,	5-	4 -	35		PEAKS		7		23	ا ا ا			PEARS	35	4	102	4.8	7.0	797		PEAKS	* 5	6.7	10	7 10	126	
÷		> 25	716	15.	383			>	575	974	774	7 7 7				>	102	710	26	137	107		•	,	102	223	961	195	
		-285	-357	5 5 5 1	-296			Þ	-195	906-	340	-345				2	123	260	136	513	178			Ð	123	195	£ .	196	
н£ 16н1		z -	2	~ 3	20			27 1	-	7		ь В-	95			n I n	-	7	3	7.	n			MIN	-	2	ຕ :	1 V	

• •																																	
5:50:		SP	c		0	0	0			5	10	0	n	•	m -																		
START TIME END TIME		ī	0.	41.7	0.	0.	0.					•	41.7	61.1	91.7																		
	_	PEED	0		0	0	0		-	4	7	0	.	2	. .																		
0 0	SINE WAVE FIT	3	0		0				SINE WAVE FIT	3					1 8 5				1	•		•	•	•				Ξ	0.	0.	0.	• •	1
	SINE	>	0	0	0	0	5		SINE	>		0	0	0	00			F11	PFFD	3	-), O	0	0		F11		SPEED	0	0	0	5 3	
IRFORC		>	0	7	0	0	0			=	>	0	•	•	7 7 1 1			WAVE F	3			0				WAVE F			0	0	0	c 0	
OTIS AIRFORCE	-	30	0	30	0	0	0		-		200	0	30	30	30		S	SINE	>		0	0	0	0		SINE		>	0	٥,	٠ د	0 0	
•		20	0	28	0	0	0			20		0	87	87	5 8 7 8		IATIO		=	, -	· c	0	0	0	ATIONS			>	0	0	0	00	
T VAD 9/18/76	IENTS	ī	0.	125.8		•	٠.	CUMULATIVE MEANS	IENTS	1	:	0.	8.521	8.571	125.8		STANDARD DEVIATIONS	1 8	1		0.		0.	٥.	CUMULATIVE STANDARD DEVIATIONS			Ξ	0.	0	0.	• • •	
VAU MINU	FUURIER CUEFFICIENTS	SPEED	0	113	0	0	o	ULATIV	FOURIER COEFFICIENTS	01305					7117			COEFFICIENTS	0 6 6 0	0	0)	0	0	STAND	ICIENT		SPEED	0	0:	o :))	
C) H 310	3		٦	0	0	0	CUM	CIER C	3		0 '	٠,	~ ·	m m		MINUTE	COEFF	3	=		0			ATIVE	COEFF			0	D 0	٥ .	0 0	
N 641	FUUF	>	0	•					FOUR	>		-	6 .	ç .	60		ONE	FUURIER	>	0	-		0	0	CUMUL	FUURIER COEFFICIENTS		>	_	0	0	כם	
1 1		0	0	06-	0	0	0			=	,	٠,	0 0	0.4	06-			•	5		0	0	0	5		14.		2	=	5	5	0 =	
01154	-	ī	0.	57.1	0.	0.	0.		-	3		0.	1.75	1.	57.1			-	=	0.	0.	0	0.	0.		-		Ξ	=	0.	n•	0.0	
V A D		SPEED	0	159	0	0	G			SPFED		- :		101	154				SPEED	0	0	0	3	0				SPEED	-	0 0	D 5	0 0	
	PEARS	2	0	1.2		0	ם		PEAKS	3	-	9 :	7 .	7 .	77			PEAKS	3	=	0	O	0	P		FEARS		3	0	D =	2	20	
28.		>	0	-85	0	0	0			,		٠,	0 0	0 1	0.0				>	ت	0	0	3	J		•		>	3	0 3	٥.	30	
		ס	n	-133	0	ח	0			0			2011	200	-133				0	0	3	9	0	ס			:	,	0	2 :	> :	00	
HE 16HT .		z E	-	~	7	,	2			212		- :	, -		B	-96	,		nln	-	7	٦	7	5				2 .	-	7	٠:	y 10	

0 0 0 10																															
5:50:		SP	27	2.4	7	 5 M				SP	27	45	1	4.5	7																
START TIME END TIME		I	1 4 4 . 4	144.1	127.8	 150.0				=	144.4	145.4	9.04	-																	
ST /	_	PEED	589	514	649	550		_		PEED	589	545	572	577	000																
	WAVE FI	S				10		WAVE FIT						-36				ī		36.9	33.2	16.7	10.5			Ī			29.0	2	
	SINE	>	477	340	344	470		SINE		>	477	397	383	5 6	0.		FIT	SPEED	26	691	54	206	£ 5		F11	SPEED	3.4	3.	125		
		>	-341	- 308	-460	 -306				-	-341	-320	-358	-342	- 355		WAVE F			7	52	30	54		WAVE F			9 6	2 3		
	-					7 7		-						23		S	SINE	>	1	154	304	519	7.0	s	SINE	>	. 7	2 .	179		
s		20	38	25	67	2.5			;	07	38	47	25	0.0	2	VIATIO		>	54	253	215	124	8.7	1 A T 1 ON		>	7	n 0	200	7	
ONE MINUTE MEANS	TENTS	I	152.9	153.9	123.9	 153.2	CUMULATIVE MEANS	IENTS		I	152.9	153.5	145.4	0		MINUTE STANDARD DEVIATIONS	1 2	Ī	20.3	35.8	26.0	33.7	14.2	STANDARU DEVIATIONS	1 2	Ŧ		5000	30.4		
VE HIN	FOURIER COEFFICIENTS	SPEED	426	222	382	368	TULATI	FOURTER COEFFICIENTS		SPEED	456	435	450	5 5	124	TE STA!	COEFFICIENTS	SPEFD	17	1 34	5.0	165	39	E STAU	COEFFICIENTS	SPEFU		0	001		
õ	H I E R		1 6	24	-12	 50	50	HER			9	71	15	£ :	0_	N I N	CUEFI			27	7	23	7 4	CUMULATIVE	COEF			7 0	50		•
	F 0 U +	>	371	330	213	 316		F00.		>	37.1	345	303	343	0 7 7	ONE	FOURTER	>	122	7	170	261	+1	CUMUL	OURIER	>	133	771	35		
		>	-173	-217	-284	-162				>	-173	-200	-223	-223	907		L	>	102	227	52	78	88		·	>	103	701	651		
	-		0.8	4.7		151.7		•		I	H. 0	3.0	4.5	134.0	,		-	ī	21.5	30.7	46.7	4.2	42.5		-	±	3.1.0	0.70	30.2	***	
		SPLED	409	SHR	200	 5 7 6				SPEED	6 04	165	245	000	2			SPEEU	99	16	45	10	7			SPLED		0 0	72	,	
	PEAKS		-50	102	39	32		PEAKS			-50	45	7.0	9 1	r r		PEAKS	3	30	171	140	7	85		PEAKS		-	2 .	1 1		
;		>	3 H 4	652		365				•	185	369	372	174	2			,	192	703	376	9.5	191			>	100		228		
		>	-427	-375	-284	 -326				0	174-	-364	-364	-355	015			3	134	235	522	70	324			5	. 10		6 6		
иЕ 16н1		Z	-	2		* v				2	-	7		в.	97	,		2	-	~	٦	7	5			2	-		, .	1 :	

°. °																																
5:55			SP	35	35	9 9	23	36				SP	35	35	39	35	2															
START TIME END TIME			I	149.0	8.4.	127.4	0.241	141.2				I .	0.64	147.2	139.9																	
		_	SPEED	595	618	5 9 5	769	240		=		SPEED	295	179	632	645	ŝ															
но 9 0.		WAVE FIT	3	=	† 9	0	-	30		WAVE FIT		3	-	20	12	10 C	2							6.3								22.6
3		SINE	>	482	789	365	515	458		SINE		>	485	5 6 5	164	96	7.7		F1.7	SPEED	83	450	67.	35			F11	2		291		
AIRFORCE			ס	-283	***	-345	1404	-367				>	-283	-350	-347	- 359	796		EWAVE	3	34	184	25	33			E WAVE					85
0115		-	30	45	45	72	39	27				30						SNOI	SINE					54		SNO	SINE	>				254
9/18/76	SNI		20						5 7			20						DEVIATIONS	-	0		_	-	5.1		CUMULATIVE STANDARU DEVIATIONS	_		1	- 13	77	13.1
9/16	ONE MINUTE MEANS	CIENTS	ī	147.7	143.9	129.4	139.5	148.0	CUMULATIVE MEANS	CIENTS		I	147.7	146.1	140.0	139.4	8.04	STANDARD	15	ī				18.3		DARU	1.5	ī	22.0	5.61	23.9	21.4
VAD	VE MIN	COEFF 1 CIENTS	SPEED	4 1 6	545	490	215	412	MULATI	OURTER COFFFICIENTS		SPEED	416	448	416	181	416	TE STA	COFFFICIENT	SPEEU		148	81	35		E STA	COEFFICIENTS	SPEED	53	117	105	121
J	ō	OURIER		12	7	1	0	-	5	3 1 2		3	12	0	œ	•	ı,	E MINUTE		*	36	74	15	- -		ULATIV	x	*	36	30	25	22
N 6 M		0	>	330	427	304	374	338		•	2	>	330	371	348	354	352	ONE	FOURTER	>	16	181	504	3 2 2		TO D	FOURIE	>	16	141	1 6 4	151
1 146			>	-210	-296	-324	-329	-210				כ	-210	-246	-274	-286	-211							1 49			:	5	131	130	126	130
01154		-	H	156.6	36.	T. + +	34.	53			•	T.	156.6	148.4	147.1	144.5	146.1		-	I	23.9	30.5	40.5	24.7				Ξ	23.9	27.4	31.7	29.7
OAV			SPEED	569	682	287	524	595				SPLEU	569	919	509	589	286			Chie	113	86	63	127				* SPELU	113	1117	101	104
		PEAKS			+	134	191	-58		3	CARS		5.0	5.6	2	16	e S		PEAKS	*	96	99	111	40			PEAKS	*	A 61	7.5	122	12.4
43.			>	781	5++	151	375	5				>	187	00+	101	. 443	D T			>	106	308	167	234				,	106	203	187	477
			2	-246	7071	-739	-320	-207				5	-240	-315	-285	767-	-242			7	101	3 UH	147	71				5	1.61	201	186	173
111913н			z	-			3	· v				2	-	7	7	I	s 3-9	8		2		2	~	4 T				1	-	2	3	* v

.0 :9	0 : 5 : 9		9.8	50	27	66	34			9		35	33	3	45																	
START TIME	D TIME		H	118.2	147.1	144.5	4.1.			3	118.2	139.9	140.4	142.2	142.0																	
90.	ž	111					999		111	SPEED	208	682	684	663	199							-										
4 O H		WAVE FIT	*	1 4 4	• •	-	-32		MAVE FIT	3	7	.5	-	-5	-				I	63.6	5.6	6.6	23.1	n			ī	63.6	27.9	24.8	23.6	
*CE		SINE	>	238	616	483	518		SINE	>	238	521	525	513	514		:	-	SPEED	155	156	45	107			F11	SPLEU		181	160	147	1
AINFORCE			5	-278	904-	- 306	-415			2	-278	-374	-383	-361	-370			* A V E	3	106	6 3	01	36	2		Y V E	3	106	16	8	6 4	
0115		-	30	29	2 5	35	35		-	30	5.9	4 6	47	7	4.2	SNO		3116	>	498	108	34	180		S	SINE	>	498	273	1 + 2	219	
91,	5		70	19	32	2.9	00			20	19	5.7	25	53	25	DEVIATIONS			כ	142	133	117	203	1	DEVIATIONS		>	142	138	129	149	
9/18/7	MINUTE MEANS	CIENTS	ī	137.8	149.6	135.3	139.2	CUMULATIVE MEANS	TENTS	ī	137.8	146.6	147.8	144.3	143.4	STANDARD DE		,	11	23.1	9.6	15.6	13.4			2	ī	23.1	13.2	13.0	13.9	
VAU	ONE MIN	FOURTER COEFFICIENTS	SPEEO	350	5 4 5	427	508	HULATTV	COEFFICIENTS	SPEED	350	964	487	470	411		1.01.01.000	2	SPEEU	101	13	36	107		STANDARD	COEFFICIENTS	SPEED	101	116	105	105	
5	0	4158			= "			5	FOURTER	3	7	0	0	01	1 9	MINUTE	500	207	3	-	34	16	0 0		CUMULATIVE	COEF		-	3.0	27	25	
1 N GH		100	>	563	395	303	383		F 0 U	>	263	+ 1 +	411	381	382	ONE	8 9 1 4 11 0 9		>	170	19	8.3	143		CUMUL	OURIER	>	170	131	120	130	
1.1ME			5	-203	-272	-281	-333			٥	-209	-256	-245	-255	-269		•		2	35	4	26	2 8 8			-	כ	35	7.8	19	100	
07154		-	-	7	151.7	47	50		-	ĭ	7	1.44.	7	4.5	•		-		11							-	11			-	17.8	
0 4			SPEED	0 0	0 0 0	667	663			SPEED	578	919	7 0	653	550				<u></u>	132	TOP	7.5	7 5				SPEED	737	132	611	101	
		PEAKS	3	551	130	16	12		PEAKS		135	131		501	,		PEARS		* SF	173	154	103				FEARS	2 4	173	123	124	102	
. ;			> ?	175	55.5	532	574			>	327	68+	205		276				,	533			9 9				>	133	651	5	117	
			0	200	1350	-357	-355			0	-455	-360	-347	505	766				0	3.5	210	0 0	37					S.	0.51	197	161	
HE 1 6H			2 · Σ	- 0	v m	,	S			2 1 5	-	,	m :	,	^				7 E	- 1		*) :	run				2 E	-	۲۰ -	7 3	run	

0:02:9	6:25: 0		SP	0	0	0	٠ ٢				5.6	0 0			- 0																
START TIME	END TIME		ī	•	•	•	187.8			•	Ξ,	•			164.2																
90.	END	F11	SPEED		0	0	165		111						96								0					0.0		. .	
0 1		WAVE FIT	*	0	0	0	-16		WAVE FIT	•	• '	0 0						3	-		•	•	•				-	•			33.3
3		SINE	>	0	0	0	128		SINE	,	• '	> 0		, ,	1.7		F11	SPEED	2 .		0	0	0		F11	0 1 1 0 3	37550	0 0) c	0	67
OTIS AIRFORCE			>	0	0	0	1011			=	, •	0		. 3	1 40		MAVE FIT	*	0						* A VE					0	
0115		-	30	0	2	2	63		-		,	0		87	7.5	SNO	SINE	>	-)	0	0	S	SINE	>	•	5 5	, =	00	7.1
•	S		20	0	0	0 5	3 9			20	,	0	0	9.5	67	VIATIO		>	•	0	0	0	0	IATION		=	,	5 C	. 0	0	11
₩/81/6	ONE MINUTE MEANS	IENTS	Ŧ	•	•	0	164.1	CUMULATIVE MEANS	LENTS				•	175.1	169.6	MINUTE STANDARD DEVIATIONS	S	Ŧ		•	•	•	•	CUMULATIVE STANDARD DEVIATIONS	s	1			•	•	7.7
VAD	IE MINU	FOURIER COEFFICIENTS	SPEED		0		124	ULATIV	FOURIER COEFFICIENTS	0.50					136	E STAN	COEFFICIENTS	PELD	0	0	0	0	0	STAND	COFFFICIENT	PEFD		o c	0	0	1.8
1 (1	0	RIER	*	c	0	0 0	o ~	TO U	RIFRC	3	c	0			-		COEFF	×	0	0				LATIVE	COFFF		-			0	
N S N		FOU	>	0	0	0 9	- 6		FOU	>		0	0	0+1	134	ONE	FOURTER	>	0	0	0	0	0	CUMU	FOURTER	>	-	0	0	0	7.1
TIME			>	c	0	0 ?	-33			D	, c	0	0	-12	-22		•	D	0	0	0	٥	c		ŭ	5	c	. c	c	Ü	<u>.</u>
01154		-	ī	•	•		202.4		-	Ŧ	0.	•	0.	151.4	176.9		-	Ŧ	•	•	•	0.	•		:	Ŧ			0.	0.	36.1
440							154			SPEED	6	0	0	80	111			SPFED	c	0	0	0	c			SPEED	c	. 0	0	0	25
		PEAKS		0	0 (0 0			PEAKS			0					PEAKS	* 5	0	0	0	0	0		PEAKS	4 5	0	0	0	0	64
78.			>	0	c 4	20	145			>	D	o	0	70	104			>	0	0	0	0	٥			>	0	0	0	٥	15
			=	0	0 0	- 2	5.0			=	0	0	0	-37	10			b	0	0	0	0				0	U	0	c	c	4
HETCHT .			2	- ,		7 2	u			411	-	2	0	2	u.					.,								r.	۳	c	u .

	6:20: 0 :25: 0				13	,	•	32 57					· ·	- 6	-	. 60																	
	ω ω			S	~	~	7	. .				SP	~	7 .	7 ~	38																	
	START TIME END TIME			Ξ :	164.2	150.2	180.0	151.4				I	164.2	144.0	164.0	160.7																	
.00	r g	111	-	7				675		F11		S	519									•											
9		MAVE	•		67	101-	-	3 -		MAVE FIT			-45	-36	-12	-12			1	42	7	9.6	9.6	-				•	I .	34.4	32.0	26.0	23.8
RCE		SINE						576		SINE	;	> 0	420	450	466	1 0 1		113	SPEED	-	108	267	501	2			F11		23.1	128	091	139	143
UTIS AIRFORCE			=			275	70	-323			=		-224	-170	-173	-212		WAVE	3	160	5.4	101	78	2			MAVE			142	129	116	101
0115		-	9	2		3 -4	. 4			-		2 2	52	5.5	24	2.0	SNO	SINF	>	124	54	897	101		S		SINE	>	124	120	791	7 7	138
/18/76	SNI		20	90	45	80	2.7		S		20	4	62	6.7	63	79	DEVIATIONS	_	>	309	122	9 2	170	:	DEVIATIONS			2	309	269	245	201	201
6/16	ONE MINUTE MEANS	CIENTS	I	139.9		167.2	167.3	153.1	CUMULATIVE MEAN	CIENTS	1	139.9	140.2	147.6	154.5	154.2	STANDARD D	S	H	5 2	7 . 4	20.0	13.4		ARD DEV		2	ī	24.5	20.9	23.4	22.2	9.61
VAD	ONE MIN	COEFFICIENT	SPEED	410	919	-	440	575	MULATI	COEFFICIENT	SPEED		462	4 4 8	4 4 5	6/+		DEFFICIENT	SPEED	9.0	133	201	104		STANDARD		FFICIENT	SPEED	0.6	132	7 7 -	121	128
GHT CT		FOURTER	3	ت	24	4	~	-	5	RIFR	š	0	•	2	~ .	c	MINUTE	COEF	*	35	#	12	23		CUMULATIVE		000			32	2 B	54	25
z		2	>	562	473	377	419	203		FOUR	>	568	343	352	376		ONE	OURIER	>	123	3.	176	119		CUMUI	0	2 1 200	>	123	133	137	6 -	130
7.1ME			ם	-243	-390	-115	-103	-251			ח	-243	-280	-234	200				>	126	5 .	100						D	126	138	65.	153	=
01154		-	H	163.6	0	178.4	Œ	OD.		-	H	163.6	157.4	163.1	9.191			-	ī	2.91	39.0	27.5	- B					Ħ.	16.2	23.2	56.9	26.3	7
V A D			SPEED	531	249	215	554	712			SPEED	531	535	529	7 7 7				DEED	a :	077	103	43					033	8 -	130	153	5 - 1	
		PEAKS	2	-47	279	31	141	6		PEAKS			19					PEAKS	S	191	200	163	•			FAKS		192	167	233	101		,
43.			>	4 8 5	413	450	T .	633			>	1 0 0	447	470	513				>	, 4	214	6 -	82			4		>	1	591	174	170	
. FH			5	5411	1346	001	951.	552-			Ð	1.45	00 1	2 7 7	1 36					141	242	176	213						0/1	100	101		
не тент			- - -	- !	~ /	- :		,			7.10	(-		•	,	ır						- ,		7	ď	
														В	-	101																	

6:25: 0																																			
		9			0 0	0 0	00				SP	•		_	_	-																			
START TIME END TIME		=	130.7				•				ĭ	130.7	130.7	130.7	130.7	130.7																			
E.N	-	SPFF	4		0 0	o C	0			_	PEED	•	• •	•	•	9																			
06 OH	AVE F					0	0			AVE FI			-83								H	•	•	•	•	•			ī	c			•	• •	
w.	SINE MAVE FIT	>	7	0		0	0			SINE WAVE FIT	>	7	. 4	7	7	7			-		SPEED	0	0	0	0 0	0		=	SPEED	c	, 0	, ,	> c	00	,
AIRFORCE		ס	7 -	0	0	0	0				>	7	7	7	7	7 1			MAVE FIT			0	0	0 (0 0			MAVE FIT			0	, c	o c	0	
A 2110	-	30	90	0	0	0	0			-	30	0.9	09	09	6.0	09		S	SINE		>	0	0	0 0	5			SINE	>	0	20	, =	0 0	0	
٠		20	20	0	0	0	0				20	20	50	20	20	20		1 A T 1 O			ח	0	0	0 0	.		ATIONS		n	c	0	C	0	0	
T VAD 9718776 ONF MINUTE MEANS	IFNTS	H	154.6	0.	0.	0.	0.	SUATE TATE		IENTS	H	154.6	154.6	154.6	154.6	154.6		STANDARD DEVIATIONS	1 5		ĭ	0.	0.	•			CUMPLATIVE STANDARD DEVIATIONS	1 5	ī		0			•	
VAD	COEFFICIENTS				0	0	0	V T A 111		FOURIER COEFFICIENTS	SPEED								COEFFICIENTS		PEED	0	c (- c			STAND	COEFFICIENTS	SPEED	C	0	0	0	0	
C	15.8	3			0			2	,	158	*		٠					MINUTE	CHEFF						0 0		ATTVE	COEFF		0	c	0	0	0	
IN GMI	FOURTER	>	66	0	0	0	0			FOUR	>	66	66	66	66	0		OME	FOURIFF		>	0	.	o c	0 0		COMPL	OURIER	>	0	0	0	0	0	
E E		D	9+1	c	c	0	0				ם	44-	144	144	94.	771			F	:	0	c	ى د	ی د					0	c	C	٥	C	c	
01154	-	ī	85.4	0.	0.	0.	0.			-	Ŧ	85.4	85.4	85.4	95.4	85.4				,	ı	0.						-	ī	0.	0.	0.	0.	0.	
× × ×		SPEED	11	6	c	0	0				SPEED	11	11	11	11	11					SPEED	0			0				FED	c	c	C	0	0	
	PEAKS		6 4	0	0	0	0			PEAKS		o	66	60	0	1			PEAKS			0 0	0 0	0	0			PEAKS	4	0	0	0	0	0	
•		>	٠,٠	0	0	0	0				,	ۍ. ا	5	٢.		ľ			a.	**		0 0	2	0.0	0			С.	>	0	0	0	0	G G	
		ס	-14	0	0	0	C				17	-16	-16	-16	176							0 0) C	0	0				- 1	0	0	0	0	0	
46.134.7		: •		,		7	ď				- - - -		,			10	2			11.4.4.4		- (1,5				- ·	_	2	3	,	tr.	

	6:30: 0				SP	69		15	42					SP	69	90	5.1	87	15																				
	START TIME END TIME				I	188.6		153.2	130.2					TH		;	•	159.5	•																				
0.	S A		F11		w .	- "	ם מ	7 7	663			F11		SPEE	5.7	26	5.0	245	•																				
4 OH			MAVE	•		-104			-1			# A VE		*	-104	99-	87-	-22	-					- :		5	9.97	17.4						I	+		47.7	2	-
RCE			SINE	>	, ,,,	5.24	510	43.4	455			SINE		> ;	399	4 4 6	7/1	2 4			:	=	-		0 0	2 0		9 8				- 1-		SPEED	158	103	110	16	100
AIRFORC			_	Ξ	- 107	-179	-282	1344	-479					⊃ c	- :	0 0	4 11	-303	1			AVE	3	217	7	7 1	0 0	7 00				AAVE			237	99	137	- :	-
0115				0.	. 4	32	36	7	9			-		30	70	1 7		7 9		SNO		2 1 1 5	>	404	2	104	125	183		S		SIME	^		9 0	507	226	707	1 10
118/76	7	0		20	62	36	5.9	30	5.7	Ų	2			707	7 0	, ,	7	6 7		DEVIATI			0	244	-	0	C	112		DEVIATION			=	2000	1 7 5	001	223	503	900
0/1	21 21 21 21 21 21 21 21 21 21 21 21 21 2		FICIENTS	ı	52.		63.	47		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	E AP	CLENTS		152.2	154.	159.3	156.1	153.8		ANDARD D	v	,	H	12.1	7.2	19.0	6.3	12.6		2		0	111					7	
VAD	u z		COEFFI	SPEED	464	454	423	391	525	* * * * * * * * * * * * * * * * * * *	LAND	COEFFICIENT	4	497	475	454	437	455		F ST	FICIENT		PEE	131	7.4	110	80	0		STANDA	11010101		PEFD		100	104	100	70-	
GMT CT	c		OURICE		α -	25	41	1.2	1.7	Ē		RIFR			22	-	10	12		MINUT	100		5	1.2	2.1	7	1.4	211		LATIVE	0	,	8		- 1	32	0 0	24	
z			L	>	427	423	3 8 5	321	455			F01	>	2	~	408	a	0		ONE	FOURTER		>	101	5.8	16	5.5	100		CUMILL	GIRIER		>	101	78	83	8 5	a a	
4 TIME				D	-240	25.5	H 7 -	-214	-2.4				0	-240	-137	-169	- 8 -	-204					l)	123	7.3	143	9 8	=					n	123	105	173	7	121	
0115				-	129.4	53.	20.	•	•			-	I	129.4	141.5	145.2	146.2	1.441			-		I	43.0	- ,	16.8	1.51	13.3			-		H	43.0	31.6	26.3	23.6	21.7	
VAD				SPEED	692	599		809	0				14.7	269	~	-	-	-					FED	69	09	9 .	6.9	9					1 E D	24	83	T.	8 1	90	
		3		,	e (5 6		1 43				SAKS		6.8	43	9	5	10			EAKS		4 50	T .	4	0,		1			SAKE		C.	a.	пЗ	16	7.3	00	
				> 0	5 8 3	200	013	000					>	193	665	5 5 5	101	701			2			671		121	200				4		,	+2 B	235	224	504	101	
3.H.T. #				= 5	- 240	20	6						-	166-	22	3.1		-					771	0 0	0 +	0 411		4						441		17.3	24.1	138	
15 137						-	9						7 7	(4.						-												2 .			ir.	
															P	-	1 (3																					

6:30: 0			43	3.8	4.7	42	£			SP			÷	.															
START TIME 6				158.4								157.5	154.4	153.0															
STA END	111	SPEED		523					-	SPEED	909	25.6	547	538															
9	BAVE F			4.	-	-10	-125		WAVE FIT				-28						17.4						ī	20.6	6.8	18.5	28.7
8	SINE	>	546	469	4 4 6	413	190		SINE	>	4 .	0 4	471	433		11	SPEED	4	06	4.0	175			F11	SPEED	5 6	9 4	9 60	101
OTIS AIRFORCE		5	-187	-183	-228	-300	1 4			>	-187	- 200	-223	-206		# A V E	*	109	7.3	52	17.1			MAVE	*	109	70	9	8
2110	-	30	5.1	21	31	30	19		-	30	5	t 0	;	7	SNO	SINE	>	115	=	20	185	U Z	:	SINE	>	115	5 1	112	155
3 Y		20	67	79	53	37	59			20	47	0 -	2 9 5	57	VIATIO		>	187	136	177	1 6 1			_	n	187	159	153	217
T VAD 9/18/76 ONE MINUTE HEANS	IENTS	<i>x</i>	160.4	158.7	151.6	138.9	122.9	CUMULATIVE MEANS	TENTS	ī	9.091	154.0	152.7	148.8	MINUTE STANDARD DEVIATION	1 5	7	8.6	21.0	55.6	37.8	AND TELEVISION AND AND AND AND AND AND AND AND AND AN		15	ī	8.8	4.9	18.2	23.5
VAD	COEFFICIENT	SPEED	525	474	403	430	339	HULATIV	OURIER COEFFICIENTS	SPEEN	525	105	45.8	442	TE STAP	COEFFICIENTS	SPEED	137	120	4.7	104	1	1	COEFFICIENTS	SPEED	137	121	13	118
	OURIER			12	6		•	5	RIER				20				¥	2.8	-	33	19				*	2.8	35	3.0	30
1 0 2	F 0 U	>	487	426	335	318	200		FOU	>	487	454	393	367	ONE	FOURTER	>	1 8	- 48	47	221	Į		FOURTER	>	8 -	131	130	155
1 HE		ם	-17A	6 7 1	-173	-278	-214			>	-178	6	-193	967-			ס	101	129	126	37				ם	101	- 13	n e	112
01154	-	7	155.4	6.67	152.9	142.8	149.2		-	Ŧ	9.551	152.5	150.4	150.2		-	1	25.7	24.2	22.5	51.8			-	ĭ	25.7	24.5	23.9	27.7
× >		SPEED	714	242	571	200	510			SPEED	614	290	564	557			SPFED	99	147	99	69				SPEED	99	601	102	60
	PEAKS	*				. 6	122		PEAKS	*	=	143	9 6	101		PEAKS		131	179	31	130			PEAKS	•	131		138	
		>	2			179	324			>	514	26+	463	7 7			,	120	201	147	279				>	120	157	160	180
		=		-255	-234	- 250	7			5	-241	-247	-243	-240			D	230	145	172	283				z	233	183	117	195
191		1		- ^		, ,	•				-		В.	104	1		2	-	2	۳.	a n				ĭ.	-			ŭ
														10	-														

6:30: 0																																
			SP	,	0 0	4					SP	,		'n '	•	•																
START TIME END TIME			I.	9009	•	133.7	•				I	5 0 9	5.09	9.09	47.0																	
		=	SPEED							111			154							1 H	0	0	•					•	٠,			
но 90.		N A V E	*	=	0 0	110	0			MAVE FIT		=	=	=	139	139													٠.			
ų,		SINE WAVE FIT	>	- 75	0 0	0 0	0			SINE	>	-75	-75	-15	392	392		:	=	SPEED	0	0	0 0	0		-			0 (
IRFOR			>	-133	0 0	0	0				>	-133	-133	-133	-516	-516			MAVE	*	0	0	0 0	0		MAVE FIT	•	0	0	9	0 0	-
OTIS AIRFORCE		-	30	52	0	2 6	0			-	30	55	5.5	5.2	67	67	SNO		SINE	>	0	0	0 0		s z	SINE	>	0	0	0	199	
•	,		20	3.	0 (0 6	•				20	3	31	-	7	7	VIATIO			>	0	0	0 0	0	011410		>	0	0	0	2 2 2	
7 VAD 9/18/76		IENTS	Ŧ	63.3	0		0.			IENTS	H	63.3	63.3	63.3	108.4	108.4	MINUTE STANDARD DEVIATIONS		S	Ŧ	•	•	•	•	STANDARD DEVIATIONS	2	ĭ	0.	•	0	63.B	
0 4 >	2	COEFFICIENTS	SPEED	102	0	0	9/5	2		FOURIER COEFFICIENTS	SPEED	102	102	102	340	340	TE STAN		COEFFICIENT	SPEED	6	0	0	0 0	STANG	COFFFICIENTS	SPEED		0			
U	5			7	0	0	<u>•</u> c	ŧ	2	HER			-	7	1	1	I NO			ž				0 0	É	100	*	0	0	C :	2 :	5
TIME IN GMT		FOURTER	>	5 + -	0	0	0			FOUR	>	- 45	- 45	-45	236	236	ONE		FOURTER	>	0	0	0	0	1	9101	>	0	0	0	398	845
1 I ME			n	06-	٥	c	-256				>	06-	26-	00-	-173	-173				>	c	0	0	၁ ၃			ס	c	c	c	117	-
01154		-	ī	143.1	•	•	97.3			-	ī	143.1	143.1	143.1	120.2	120.2			-	ī	0.	•	0.	0.0		•	ĭ	0.	•	0.	32.4	37.4
0 * >			SPEED	162	c	c	362				SPEED	162	162	162	242	292				SPFED	0	0	0	00			SPEED	0	C	C	= :	-
		PEAKS	*		0	0	œ C			PEAKS	*	80	8		204	204			PEAKS	*	D	0	0	00		3	 •	٥	0	0	302	302
•			>	129	0	0	4 0				>	129	129	129	87	7 4				>	0	0	0	0 0			>	0	0	o	5	65
				46.	0	0	-358				z	96-	46-	.34	-227	-227				7	0	c.	0	c c			5	0	0	0	1 9 5	5 4
11.511			2	-		•	ı v				-		٠,		U	u.				-	-	2	٠.	3 U			-	***		~	4	

	6:35: 0			SP	0	Ŧ (. c	. 0				SP	0	•	,	7 :	•																
	START TIME			1	0.	12.2						Ŧ	•	12.2	12.2	12.2	12.2																
.04	STA		F1.1	SPEED				00			F17	SPEED				4 1 6					11	•	•	•	0.0				1 H	•			
0 H			WAVE FIT	*		6-		00			WAVE FIT	*				- 47													_				
E			SINE	>	0		5 C	0			SINE	>	0	- 8	9	8 -	-18		:		SPEED	0	ο :	Э (0 0	•		111	SPEED	00) (0 0	0
AIRFORCE				>	0	e .	5 C	0				>	0	٠,	•3	• 3	-			N A V E	*	0	0 0	> (0 0			* A V E	•	00			
0 115 A			-	30	0	73	o c	0			-	30	0	73	7.3	73	13	SNO		SINE	>	0	20	0	D	o.	N S	SINE	>	0 5	5 3	o =	0
16		s		20	0	0 0	- c	0				20	0	4 9	40	0 1	4	DEVIATIONS			>	0	00	0 1	0 0		IATIO		n	0 0) C	0 0	0
9/18/76		ONE MINUTE MEANS	IENTS	H	•	217.3		• •	V 2 4 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		IENTS	Ħ	•	217.3	217.3	217.3	217.3	STANDARD DE		2	H.	0.	0.0	•	•	•	CUMULATIVE STANDARD DEVIATIONS		H H	0.0			0.
0 V V		NE MINU	FOURIFR COEFFICIENTS	SPEED	0	= '	0 0	00	2		COEFFICIENTS	SPEED				=				COFFFICIENTS	SPEED	0	0	וכ	0 0		E STAND	CHEFFICIENTS	SPEED	00	: c) C	0
1 1		0	RIFR	*				00	5	2	FOURIER	*		c	•	•	•	MINUTE			3	0	0 0	5	0 0	,	LATIV		*	c c) C	0	0
IN GHT			F 0.U	>	0	80 0	0 0	0			FOU	>	0	9 8	8 3	80	80	0		FOURTER	>	0	0 0	0	0 0		CUMI	FOURTER	>	00	· c) C	O
TIME				Þ	C	67	c c	o c				D	C	47	47	47	41				>	o	c (21	c . (ס	c	٠. د		c
01154			-	ī	0.	85.8	•				-	ī	0.	85.8	85.8	8.2.8	82.B			-	ī	•	•		0.	?		=	н_	0.0			
C 4 >				SPEED	0	191	c (0				SPEED	C	164	164	164	164				SPFED	C	0	21	0	0			SPFED	00	c	c	e
			FFAFS	*	0	• 5	0 0	0 0			PEAKS	*	0	.5	-5	- 5	- 5			FEAKS	*	0	0	0	0			PEAKS		00	2 6) C	0
	25.			>	0	6-1-	c (0 0				>	ũ	-	- 5	-	-				>	0	0	0	0 0				>	00		J E	C)
				٥	0	-145	0 0	5 6				ż	0	-162	-145	-162	-145				- 11	C	0		C (0			2	00	o C		C
	HE16H1			-			r. 5					: 2		٠.	r.	17	4				-		~		e v				-	(c	44	U

6:35;	3				2 1	r 3		121				SP	2 :	9 6	4.2	0														
TART TIME	D 11ME		:		3 0 7	130.2	48.0	9				ī	156.1	149.7	149.6	0														
5.1	.	11.	9		420	297	528	2 9 9 9			:	SPEED	808	624	809	606														
		MAVE FIT	٠		. •	115	21	17		2 4 4		*	-	. 5	= (7			1	2.9	11.8	•	5.0				H	2.9	10.	10.7
		SINE	>	737	528	224	451	8 8		SINE		> ;	572	538	523	7,5		111	SPFFD		-	0	25		=		SPEED	220	S	182
			5	-320	-305	-193	-272	-285				0 6	-308	-297	-293			MAVE			4	0	3 O		4 4 6			6.5	7 .	53
		-	30	72	37	5.5	4 9	5 60		-		30	4 2	4	7 50	2	SNO	SINE	>	217	125	0	s 0	v	SINE	,	> ;	117	701	99
	SN		20	80	59	7.1	43	7	s		,	7 0 7	. 40	9.2	 		DEVIATION	-	ח	25	121	0	0	> 4 - 1			5	75	001	101
	MINUTE MEANS	CLENTS	H	140.3	151.1	1.1.4	164.1	- - -	F HEAN	TENTS	2	149.3	150.7	146.8	149.2		STANDARD DE	S	ĭ	9.1	1.3	•				:	. :	• •		0.01
	E Z	COEFFICIENT	SPEED	748	440	359	305	4 00 0	CUMULATIVE	COEFFICIENT	2000		915	200	1 T			FFICIENT	SPEED	88	9 7 -	c ;	0	STANDARD	TCIENT	2	J a		- 82	
	0	OURIER	×	1.2	20	-37	•	-2	0.0	w		2	8-	13	==		HINUTE	COEFF		'n	50	0 0	0	CUMULATIVE	COEFF	<i>y</i>		25		2
		FOL	>	249	385	131	292	966		FOUR	>	642	442		391		ONE	OURIER	>	152	6 -	0 0	0	כמאמו	OURIFF	>	152	162	182	
			n	-369	-219	-333		- 2 H S			ח	-369	-253	-261	-233			•	>	8 5	<u> </u>	2 5	0		L	5	9	124	6 -	
		-	ī	130.9	151.2	170.5	2999	7.011		-	ī	130.9	-	149.1	147.2			:	I	•	•		•		-	1	23.9	15.5	16.4	
			SPEED	552	- 0	50.	0 10	c c			SPEED	555	299	577	267				PFED	97	2 0	•	0			4	126	<u>-</u>	0	0 0
		PFAKS	*	123	C	547		Ç.		PFAKS		329	113	72	0			PEAKS	5	. (54			EAKS	4	296	185	216	701
•			>		200	2 1 2	157				>	368	0 0	107	294				> 2	15	0	31	0		a.	>	152	131	127	711
							-1.74				2	1381	-312	-277	-288				⇒ Q		0	9 4	0			-	ď	- C	128	121
						. 1								. 3	u						•	2	v			.1.			e	7

	D																														
	6:45:		SP	0	0	0	0	•			SP	0	0	0	0 :	<u>•</u>															
START TIME	THE CAN		<u>=</u>	•	•	•	•	208+8			Ŧ	0.	•	0.	0.400	8 8 9 0 7															
90.	2	F17	SPEED			0				F.1.T	SPEED				0 0					0	0	0 (0	0	0 0	0 0
9		WAVE FIT	*	0	0	0	0			WAVE FIT	*	0	0	0	0.				-	•	•	•	•••				I	•	•	•	• •
CE		SINE	>	0	0	0	0	182		SINE	>	0	0	0	0	701		111	SPFFD	0	0	0	00			F17	SPEED	0	0	o :	00
AIRFORCE			9	0	0	0	0	100			3	0	0	0	0 5	3		MAVE		0			00			AAVE	•				00
0115		-	30	0	0	0	0	-		-	30	0	0	0	0,7		SNO	SINE	>	0	0	0 0	00	Ş	2	SINE	>	0	0	0 0	00
176	s		20	0	0	0	0	32			20	0	0	0	6 5	;	VIATIO		>	0	0	0 0	00	14110			ר	0	0	0	0 0
9/18/76	ONE MINUTE MEANS	FOURIER COEFFICIENTS	Ŧ	0.	•	•	0.	198.9	CUMULATIVE MEANS	CIENTS	Ŧ	•	0.	•	0.0		MINUTE STANDARD DEVIATIONS	15	ī	•	•	•	•	SNOTTELVED GRACUATS STITE UMUD		15 1	11	•	•	0.	
V > 0	NE MIN	COEFFI	SPEED	0	0	0	0	101	MULATI	FOURIER COEFFICIENTS	SPEED	0	0	0	0 6	2	TE STA	COFFFICIENT	SPEED	0	0	0 0	0	STAN		COEFFICIENT	SPEED	0	0	0 0	00
5	0	RIFF				0			00	RIER	*				c -				*	0	0	0 0	. c) T A		COEF	*			0 0	
1 8 G 1		FOU	>	0	0	0 (5	5		104	>	0	0	0	0 -		ONF	FOURIER	>	0	0	0 0	0 0	CUMI		FOURTER	>	0	0 0	5 C	0
1146			n	0	0	0	0	35			n	0	0	0	3,5	?			5	0	0	0 6	o c o				n n	C	0		0
01154		-	ı,	0.	•	•	0.	139.6		-	Ŧ	0.	0.	•	0.61			-	Ŧ	0.	•	• •				-	1	•	0 0		0.
VAD			SPEED	0	c .	c (95			SPEED	0	c.	0	0 45				SPEED	C	0 (6				SPEED	0	E (c	C
		PEAKS		0		c (5 (•		PEAKS	•	0	0	0	0 0			PEAKS	*	0	0	0 0	0			PFAKS	*	c) (0 0	0 0	0
۶۵.			>	O	0	c (-			>	0	0	. ن	-				>	U	00	<i>- c</i>	, 0				>	0.	. 0	00	0
не 16нт .			D	0	0	0 0	0	001-			n	0	c,	0	- 100				٠	0	c c	5 0	0				13	0 (0	c
HETG			1	-	~ .	·, s		•			.1 4	-		٠, .	В	-10	8		i.	-			U				1				U

0:40:9			0	23	5.2	0+	:				•	0	23	9 1	. 43	2																	
START TIME 6		1H SP			118.5						S				130.7																		
90. STA	F1.1	SPEED	0	628	7 7 9	548	386			FIT					240						0.	0.	- 5	. 2				I	0.	٠.	- 1	1.1	
9	MAVE FIT	*		-37	53	-133	39			WAVE FIT					- 65					=	0.		7,	25.2				-				2 +	
w	SINE	>	0	618	190	338	353			SINE	>	0	618	276	310	341			FIT	SPEED	0	0	189	112			F 1.1	SPEED	0	0 :	201	201	
AIRFORCE		>	0	-108	-475	-341	± -				>	0	-108	-405	-369	997			MAVE FIT	*	0	0	5.0	, m			MAVE	*	0	0 5		130	:
S 110	-	30	0	80	7.1	5.5	5.3			-	30	0	9	74	. 4	•	,	^	SINE	>	0	0 !	378	88	ų	2	SINE	>	0	0 2		266	
92 S		20	0	19	60	55	7.1				20	0	19	83	6 9	8				ח	0	0	356	193		05.01.01.01.0		>	0	0 9		299	
T VAD 9/18/76 ONF HINUTE HEANS	IENTS	=	0.	159.4	129.6	149.2	174.9		E MEANS	STN31	H	•	159.6	135.6	143.0	151.5		MINUTE STANDARD DEVIATIONS	1 51	ī	•	•	24.5	27.3		שאט טאאט	1 51	ī	•	•	25.9	28.5	
VAD WF HINU	COEFFICIENTS	SPEED		774	463	571	27.6		COMULATIVE MEAN	FOURTER COEFFICIENT	SPEED	0	+ + 9	466	538	100		IF STA	COEFFICIENT	SPEED	0	0	123	11.8		COMULATIVE STANDARD	CREFFICIENT	SPEED	C	0	- 34	184	
U	œ	5	c		13	20	2		2	RIFR	¥	0	^	12	9	12				*	0	0	20	12		5		×	O	C !	- "	25	-
2	FOURTE	>	c	*04	292	454	243			903	>	•	409	354	664	364		200	FOURIFR	>	0	0	195	7.1		0.00	FOURIFR	>	0	0	219	141	
1111		5	c	-224	-316	-271	7				ם	0	-224	-297	-283	-226				ם	o	c	124	171				כ	0		5 :	163	
01154	-	1	•		149.0	139.2	164.2			-	ī	•	161.0	151.4	44.8	6.64			-	ī	•	•	20.7	9			-	H	٥.	0.		25.6	
>		Spern		44.7	536	643	5.				SPEED		642	557	919	195				PEED	c	0	9 4 5	- 4				PFED	c	c. ;	5.5	132	-
	PEAKS	*	c	6	0	15.2	-1117			PEAKS	*	0	6 9	34	8	.			PFAKS		0	0	0 4	143			FFAFS	•	0	0 9		7.0	
;		>	-	107	0 7 7	4 5 5	394				>	0	109	473	4 4 4	2				>	Ü	0	511	125				>	C	0	171	224	
n		-	-		577-		021-				2	0	00	5	a	۲,				9	0	C	29.	-				ü	0		1 1	1 4 .	8
HE 16HT						, ,	ď				=			•	*	ď				2.1		2	m :	·				:		r. 1	n :		

7:25: 0		9.5		39	31	5.1	27		ę			9.5	39	34	0,	37	ŕ														
END TIME		1		171.4	172.1	173.1	176.3		•			Ŧ	171.4	171.7	172.2	173.2	1/3.4														
	-	CPFFD		634	617	757	575		7.		1.	SPEED	634	625	199	6 45	710														
	WAVE FIT			-27	-20	0	717		67-		WAVE FIT		-27	-23	-16	91-	-			ī	8.3	5.0	0.	15.4				8.3			
	SINE	>		622	608	200	140	000	119		SINE	>	622	615	409	597	004		F 1 T	SPEED	25	57	151	3		-	SPEED	25		104	0
			>	- 6	7 2 1	- 0 -	0 0	66.	- 33			n	- 91	-87	-87	-15	1 6 4		Y A V E		22	17	39	6		T A V E		22	- :	12	200
	-	4	3	5	2	0 4	0 0	07	12		-	30	6 1	39	45	0 7	36	N.S	SINE	>	5.8	23	268	50	Ų	SINE	>	90			
n		46	0.7	45	30	0 0		15	3.1			20	45	33	0,	34	38	EVIATIONS		>	88	63	094	- 64		_	n	8	/ 3	052	663
ONE MIJUTE MEANS	1EN15		=	172.5	9.071			0.0/1	177.4	CUMULATIVE MEANS	1ENTS	ī	172.5	17100	173.8	174.3	175.0	STANDARD DE		ī	6.9	11.3	35.4	7.0			I	9.3	0.01	9.07	
VE MIJU	COEFFICIENT	1					5 4 5			MULATIV	OURIER CUEFFICIENT	SPEED	528	204	216	430	£ 0 ,		COEFFICIENTS	SPEED	11	6.00	171	5 t		COEFFICIENT	SPEED	11	93	115	100
5	CURIER		3	2.1	0 0		-	- 5	7	0.0	HIER	·	2.1	+7	7.1	61	52	MINUTE		ž	30	28	α 7	30		K Coff		36	2 2	36	13
	100		>	2		7 6 7	TEST	0 1 1	5 5		F 0.1	>	1 5	164	490	473	411	340	FOURTER	>	18	8	723	. .		F OUR 16	>	ī	ā	133	123
			D	* 4 -		0 2	36	-30				n	7 4 -	-73	9-	- 36	-33			D	8.2	104	216	105			0	H.	-	1 45	135
	-		=	174.4		5.11	184.7	166.6	177.0		-	ĭ	176.5	175.4	178.4	175.6	175.9		-	==	12.9	20.9	0.57	7.3		-	111	14.9	17.0	9.61	18.
			SPEED	11.14	200	636	0.40	516	634			SPERD	1	7 1 4	0 5	0+0	0.40			SPEED	÷ 5	7.3	100	7.0			SPEED	45	9	15	но
	FEATS				0	7 1,	1.7	30	;		FEARS			2 3	, ,	25	(4.3		PEAKS	*	7.4			75			 i	7	5.5	7.1	7.0
			,	4	0	109	634	1,95	579			,			170	600	614				1.7	101	143	75	r c		>	57	Ŧ	100	0
			2		7	***	20	1.71-	-							7	-				15.6	703	163	43			0	15.6	116	202	184
			n.I.r.			7	~,	7	.o			11.4				7	л 11	0		21 11	-	7	*1	*	0		21.4		2	*	

	7:20: 0					09	25	53	36							0	,			50																					
	START TIME			1					178.3										172.6 5																						
.0.	EN ST		F17	SPEFD					299				111						999																						
ĭ			A V E	3	9-	-	- 26		-32				WAVE FIT		2	9-	• 5	=		-17					1			7		3.8						I	14.9	15.9	13.8	- *	12.8
RCE			SINE	>	615	649	659	4	659				SINE	,		9 19	631	7 9	7 .	7			113		٩		4	79	69	5.5			-		4	_	9 ,	26	62	£ .	09
AIRFORCE				Э	-165	-142	- 2	-	-62							691		901-	0 0				NA VF		X		. :	4.8	34	8.2			MAVE FIT		G	0			33		
0115			•	30	9	73	9	2.1	œ				-								ď		SINF		>	88	14	7.4	48	9 9			SINE		>		0 -	- 0	74	100	
92/	so 2			20	53	56	27	61	6					20	20	, ,	0 0	7.5	74		DEVIATION				2	147	123	150	891	4.2	ATIONS	040			2	101		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	2 7)
9/18/7	ONE MIGUTE MEANS	FOURTER COLFFICIENTS		I.	160.3	5.191	177.2	177.1	173.1	CUMILIAT. VE MEANIS	T A L	Fuls	0	ī	60.3	63.8	48.	70.5	171.0		ARD DE		-		ī	13.6	1.6	15.1	15.3	~ • •	STAL DARD DEVIATIONS		-		1.	3.6	2.1	2	V 10	3.5	
VAU	A 1 at	OLFFIC) PEED	531	23/	5 5 8	295	155	. T . I		COFFFICIENTS	-	0	_				549		STANDARD		COFFFICIENTS		EED	25	+0			-	TA. DAR		ENTS								
t	0	16 P. C.			2 0					CUMU		EB		S		-					MINUTE		DIJJJ		A SPE								COFFFICIENT		is				2.5		
1 N S 11		FOUR	2	- 5	0 1 4		7 7 7		550			FOURI		>							ONE M		RIER								CUMULATIVE		DUMIER CO						76 34		
11ME			=	-171										ם									00		000	•	-						F 0.0 F								
07155		-	1	75.7		85.9	76.4	15.3	•			-				72.1 -1							:		15.4								-		٠. د	-		-	4.4 134	-	
0 4 7				.0			_	-	•					C F D	_		-		_					10 1	3			7.0										_	61 16	-	
		PEARS	6	12	-73	7.0	19	40				FARS		0 0								3.44	1	SPE.	D	6.8	103	25	15				7	* ***	Cal			_ ,	, ,		
÷3.			>	799	619	1 5 4	OHO	9+9					>			5/0	67.5	673				1		>	1	1		00								-	* 1.				
1641 =			D	-5.		14	5-	09-					13	15.4	. 6 -	75.	24-	94-						73	i r	158	170	165	170						U.W.	1.6.1	a		171		
n£ 16			11111	-	V -	7	1	ın					nln	-	2	- I			1	1				w l w	-	,	*1	,	fi .												

7:25: 0		•	30	2.8	34	20	23			SP	30	5.6	31	5.8	27															
START TIME FEND TIME 7							185.1																							
	11.	SPEED	621	909	019	570	989		=	SPEED	621	613	612	909	624															
но 90.	WAVE FIT	3	- 30	-	91-	7	-55		WAVE FIT	3	-30	-13	1-1	- -	-24			Ī	4 . 5	2.5	13.3	1.91			Ŧ	4.5		8.7	0.01	-
5	SINE	>	414	595	571	550	619		SINE	>	919	909	294	286	809		F11	SPEED	45	28	7.	09			SPEEU	45	36	æ ;	5.0	2
AIHFORCE		0	79-	-108	-171	-55	2.6			2	19-	-88	+	-104	165		MAVE		20	54	7.	2.5		A V					23	
0115	-	30	3	22	27	4	20		-	30	7	32	31	33	37	540	SINE	>	7	56	16	6 3	5	SINE	>	1 1	3.4	5.5	4 0	
36		70	7	35	45	8 7	5.5			20	7	39	7	45	2	VIATIO		>	53	58	133	889	IATION		ם	53	2.5	16	103	2
T VAU 9718776 ONE MIGUTE MEANS	21E4TS	Ξ	170.6	170.7	163.0	167.6	186.4	CUMULATIVE MEANS	IENTS.	ī	170.6	170.1	168.3	168.1	172.4	MINUTE STANDARD DEVIATIONS	1 5.	1.	4.7	3.3	11.0	12.8	STAL DARD DEVIATIONS	2	H	4.7	3.8	7.5	r. 5	
VAU WE MIN	CUEFFICIENTS	SPEEU		475	473	454	558	TOLA TIV	FOURTER COEFFICIENTS	SPEED	515	101	487	485	200	E STA!	COEFFICIERTS	PEED	6	25	75	112		COLFFICIENTS	PEED	64,	53	5	0 4	0
0	FOURTER			0 1	7	S	43	50	KIEP			3.6	30	26	30	N 1 2 C	COEFF					24	CUMULATIVE						22	
E IN GRI	FOU	>	507	t 9 t	* * *	433	543		FOU	>	201	484	473	444	787	ONE	FOURTER	>	52	23	7	5 - 5	COMO	OURIER	>	25	5.4	- ;	10	
1 2 2 3			-81	-15	-136	-12	5.3			n	- a -	-78	96-	76-	6.7.3			>	38	56	10:	121		•	0	38	31	6.5	100	
01155	-	<u>+</u>	176.4	169.5	1.001	179.5	165.7		-	1.1	176.4	172.1	170.6	172.1	175.3		:	7.	1.9	6.0	7.00	11.3		-	1	6.7	4.5	e .	12.9	
GV >		SPEED	637	6 2 3	119	211	180			SPEED	154	679	524	919	631			SPEEU	47	15		T 9			SFELD	4.1	38	5		
	PEAKS	×	47	-	*	3.1	113		PLAKS		24	7	5.8	5.3	25		PEATS	2	5.6	5.0	9 3	9		PEAKS	3	24	5	5 0	2 2	
		>	6.32	909	2.41	9+5	4 4 6			>	034	0 1 1	100	578	-			>	40	5 7	9 7	7.7				5	3.4	200	2 0 7	
		n	C+-	711-	151-	1.	e e			D	-40	-11	701-	7	;			0	15	5	2 -	131			n	15	7	5,	131	
ME 1 6++ 7		2 2	-	2	•	•	S			1111	-	~	В		112			+111	-	, .		5			11111	-	~		r in	

7:25: 0																																			
			SP	29	58	2	4	3				SP	29	45	4.5	4	4.5																		
START TIME END TIME			ĭ	175.1	178.4	161.5	179.3	185.1				ī	175.1	176.6	171.3	173.2	175.4																		
EN		_	PEED	637	589	255	980	999				SPEED	637	919	593	613	623																		
∙06 0н		WAVE FIT	3	•							WAVE FIT			8 -		6	91-				ī	8.2	9.5	12.9	10.5	7.6				ĭ	8 . 2	8.6	12.4	12.3	1.7.1
		SINE	>	630	185	515	671	658			SINE	>	630	607	574	596	809			F11	SPEED	32	9 2	39	, 3	0			=	SPEEU	32	4 0	7 0	7.5	.
AIRFORCE			n	-50	-17	-173	8	6.1				>	-50	-35	-83	- 6 6	-45			WAVE			53	1.1	35	-			AAA					30	
0115		-	30	18	1 9	21	8	1 2			-	30	18	6	5.0	6-	8.7		SNO	SINE	>	13	08	25	11	0.6	S	1	SINE	>	33	62	7 .	# r	ì
47,	S		9.0	23	78	23	73	15		10		20	23	24	54	54	22		DEVIATIONS	_	>	9.2	104		6	9	/1AT10			>	8.5	9.5	150	175	173
4/18/7	MINUTE MEANS	TENTS	ĭ	176.9	177.2	158.0	178.6	184.4		CUMULATIVE MEANS	STENTS	H	176.9	177.1	170.4	172.3	174.6		STANDARD DE	S	Ξ	9	12.8	==	13.9	o • • • • • • • • • • • • • • • • • • •	CUMULATIVE STA, DARD DEVIATIONS	U	0	ī	8 . 4	10.4	9.6		7.5
VAD	ONE MIN	FOURTER COEFFICIENTS	SPEEU	531	457	435	155	587		TULATIV	COEFFICIENTS	SPEFD		497	475	473	210			COEFFICIENT	SPEEU		8 9	19	63	102	STA	31.31.33		SPEED	5.5	1.1	12	16	r
U	0	2 1 2 1		8.5	-15	#	7	5		n)	OURIER			25	1 8	13	21		MINUTE				28	33	9+	-	LATIV	300	5		33	œ +	6 :	*	7
1 м 6 м 1		100	>	575	447	397	539	211			100	>	575	489	457	475	+6+		ONE	UUR 1ER	>	5	9	5.3	49	501	CUMU	9 3 3 3 10	200	>	23	7.1		£ 6	۲,
1146			n	-21	-28	-162	-16	4.8				>	-21	-24	-72	-59	-39				0	7.8	106	83	129	901				2	7.8	æ æ	80.	113	-
01155		-	Ξ	172.6	172.5	165.0	180.8	181.6			-	1	172.6	172.5	169.9	172.4	174.1			-	ī	12.8	13.4	16.3	14.5	13.6		•		ī	12.8	15.5	0.	9.	
V A D			SPEEU	655	919	219	612	593				SPEED	655	637	919	629	149				SPEEU	3.3	13	19	* .	0,6				SPEEU	33	0.9	5.0	7.0	
		PEAKS	X	7.0	-23	61	•	103			PEAKS	*		17						PEAKS	2	15	97	7	15	f ,			CARS	*	2.	Ť.	2:	- :	
÷			>	635	265	533	929	611				>	6.35	619	065	609	010				>	37	9	99	83					>	31	19	2 .		5
u			0	9.	-10	9+1-	-	20				0	-80	-10	-100	- 75	15-				D	5 + 1	141	140	151	791				ס	145	*	+	5	121
нЕ 1 6 н Т			n I u	-	2	3	7	S.				n n	-	. ~			- 1	13			z E	-	. 7	3	,	S				212	-	7	•	,	

7:30: 0		20	21	33	12	1 7		20				9		27			3.4	85																		
START TIME END TIME			176.7	187.9	176.1	181.2						1	174.7	182.3		000	5.00																			
	<u>-</u>	SPEED	297	623	640	989					11.	0 0 0 0 0	200	1		670	710	000									ο.					7	2	8	2	7
HD 90	WAVE FIT		9 7 -	91-	-42	-21		•			WAVE FIT	3		-	1		. 36	.7-					1	4.7		•	- :	• 7 1			F	•	10.	•	8.5	-
щ	SINE	>	588	612	757	675		138			SIME	>	. 0	000	0 .	179	1 1 0	0.0			F 1.1		SPEED	182	001	9 0	À ;	0		F 1.1	SPEEU	182	- + -	118	101	113
AIRFORCE		>	147	8 9	411-	-		061				:		7	,		٠;	96			MAVE		3							MAVE	4	8 0	9	20	7	÷
0115 A	-	30	47	30	2 -	0		2.5			-	,	2	, ,	15	5.3	17	97		N.S	SINE		>	179	001	2.	J .	501	5	SINE	>	179	139	1117	105	1112
٠		20	59	3.2	, -	2 - 2	,	-					0,	7 :	9	35	15	87		DEVIATIONS			ח	106	11	7	137	143	101101	_	ס	106		4 9	105	135
T VAD 9718776 ONE MINUTE MEANS	STENTS	I	170.8	1 29.		1000		1 0 4 0 4		CUMULATIVE MEANS	COEFFICIENTS	•	- :	8.071	7.081	178.9	1.671	187.1		STANDARD DE	15		11	14.8	8.9	;	13.2	13.9	2 NOTE A TO A CONTRACT OF A STATE	S	ī	14.8	15.3	12.3	17.5	13.8
OA Y	COEFFICIENTS	SPEEU	541	4		0 7 2	0.80	849		1ULAT1	COEFFI		SPEED	195	530	244	554	516			COFFFICIENTS		SPEEU	99	=	16	90	11	2 2 2 2	 COEFFICIENT	SPEED	99	93	18	9.5	7.0
C	FUUNIER		20	9.0		0 0	6.7	- 3		COL	FOURTER			50	5.4	37	33	31		MINUTE	0.00			30	50	32	1.7	-	2114		c	311	52	32	53	32
1 12 6 11	FOUR	>	2 2			200	7/5	634			FOU		>	534	215	532	245	56:)		0116	HAIRI		>	19	101	7.5	11	112		OURIER	>	19	8.3	6.7	5 2	4.4
1146)	- 84				r.	154					0	-86	0	=	0.7	2.1			4		2	143	6	4.5	136	132		•	0	143	143	114	-	136
01155	-	1	1 001		42.8	171.4	144.2	130.0			-		H	180.1	187.9	181.8	182.4	183.9			-		11	33.0	3.8	12.3	1.1.4	6.9		-	ī	33.0	23.7	21.6	1.4.	11.3
2 4		SPEEU	404	0 1	759	089	10B	808					SPLED	949	0 + 9	661	612	0					SPEED	16	20%	65	63	2.8			SPEED		1.4	14	7.3	0
	PLAKS			0	40	5	0.9	45			P AKS			5.8							5 4 5 5	1	5	6 5	35	19	7.5	7.0		PEAKS	*	0	7	Y y	3	5
:	-	>		310	179	424	5.50	1.15					,	215	299	129	639	699					>	159	5.6	95	11	15			,	151	121	109	105	116
" -		n	11.	07-	174	-102	5.1	135					0	-23	7.3	1	11	9+					D	298	3+	146	133	-			0	24"	724	211	198	186
HE 16HT		mln		-	~	•	7	S					2 1 1	-	2			.s	14					-	7	*	*	5			2	-	. 7	*	,	'n

:35: 0				55	-		66	7.0	55							0 0			0 1	20																				
		0	,											1																										
END TIME		1							189.9					-					180.																					
	-	CPFFD		618	577		110	459	808					SPEFO		0 0		959	0 ,	10							-												•	
	WAVE FIT	3		-	٠	1 :	- 5 4	3	-25				MAVE FIT	3	: 1	•	٠ د			ì					I	5002	13.0	6.6	28.8	13.6					I	20.6	17.8	15.6	- 6	1 A . 4
	SINE	>		584	244		101	285	781				SINE	>		100	د / د	119	909	9 9			113		PEED	27	104	- :	7	63			F 1.1		SPEED	2.7	7.3	4	16	101
		-		-58	11		-21	83	126					=		5.5			-	3.8			3		U			9 !					MAVE			3.7	30	7 11	50	11
	-	90	36	6-1	20	7	9	58	2.1				-	36			<u>^</u>	-	22	2.5		S	3415		>	8.7	109	51	70	90			SIME		>	7 8	9	1113	102	126
		-	0	32	200	0.7	34	36	23							32	97	53	~	67		DEVIATIONS			2	192	104	116	298	160		ATIONS			n	197	166	6 + 1	761	001
ONE MINUTE MEANS	LENTS			171.7		6.791	177.9	188.3	6.061		0111	CUMULATIVE MEANS	LENTS	1		171.7	176.6	177.0	179.7	182.2		STANDARD DEV	U					8.3				STANDARD DEVIATION	5	,	ī	21.5	17.9	15.2	20.5	
E M1.4U	COEFFICIENTS	. 0	PEED						549			ULATIV	COEFFICIENT		2				508					1010	UEEU	2.1	+	9.2	30	7.4			FFICIENT		SPEED	,	75	01	0	
NO	¥		2	4		13	7	ď	4.3			200	x			c	0	17	7	20		MINUTE	23.10.5	1	8	54	30	2.1	24	ر ع		CUMULATIVE	9.900			6.44	1 3	3.6	3.6	c
	FOUR		>	467		470	556	435	633				FOURTE	3	•	745	466	707	- 27	515		9110	0.11	831800	>	5.3	115	62	+	* 0		CUMUL	H 1 H 100		>	0	n oc	T E	40	
			0	-47		35	-26	4.5	114					:	5	79-	-1-	-20	7	17					2	173	-	8.2	552	143			i.		5	173	143	124	141	
	-		I	142.9		194.8	180.1	182.7	178.7				-		=	162.9	177.6	178.4	179.9	179.3				•	ī	32.4	23.0	11.5	10.2	×.			-	:	ī		31.9	25.8	23.7	
			0	017	000	209	7.33	454	67.8						SPEED	6.30	619	655	699	/01					SPEEU		121	09	5.3	2					SPEEU		n x	3	T.	
	EAKS	i	5.	2.5	3.5	+	26	14	7.6				EAKS			3.2	6.1	3.5	I J	5.5				FEARS	5	7	3	3.2	0.9	99					5	-	79	75	7.1	,
	PE		,	- 2		2	N	. 3	770				1		>	1+5	255	9119	679	499					,	551	178	50	71.6	7					>	3	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	173	5	
			1)	7	200	1117	*	7.7	~ -						- 17	-130	5 -	7.	-	7-					0	157	154	138	111/	111/					7		167	217	163	
			ZIN			2	3	1							2		7	3	7		1 5				 I.		~	3	7	un.					2		- ~	. ~	3	ı

B-115

7:35: 0				SP	26	77		31	55					SP	92	54	30	30	16																					
START TIME				ĭ	185.4	1.4.1	18/	182.3						ĭ	185.4	182.8	184.2	183.8	182.3																					
	C M C		F11	SPEED	802	7 7 7	489	603	628				FIT	5	1									ı	9.	.	• 3	2.0	0					I	9. 1	2.5				
0 6 QH			WAVE	3	- 47	0 7 -	-32	145	- 42				WAVE		- 47																									
			SINE	>	196	242	675	595	950				SINE	>	196	771	741	106	687			113		SPEED	32	56	16	9	6			111		SPEED						
AIRFORCE				n	16	٠,	83	23	-35					:	7	0 0	5 3	4 9	28			4 / 4		3	11	17	22	2.5	3.2			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		3		_	17		2	
0715 A1			-	30	~	15	8	7	13				-	;	30	2 -		. 10	1.7	:	SHC	2117	31116	>	35	26	8.2	7.0	20		NS	2112		>	35	7	7.1	66	26	
•				20	21	20	21	17	20						20	17	21	20	20	0,	VIATIO)	9	58	69	101	66		VIATIO)	19	7.1	11	14	68	
9/18/7		MINUTE MEANS	ENTS	1	2.00	79.5	200	83.1	176.8		274 27	E MEANS	1ENTS		I.	185.4	197.	185.0		183.2	STANDARD DEVIATIONS		2	I	7.1	6.9	8.9	1:1	11.3		STANDARD DEVIATIONS		5 - 1.	111	7 . 1	7 . 4	8	4.2	101	
U & V		E MINUT	CUEFFICIENTS		, ,				055			CUMULATIVE MEAN	COEFFICIENTS		SPEED								FFICIENT	2000	י ר	- 0	. 4	73	3				COEFFICIEN	SPEFU		5.3				
t		ONE	IER C		2 .	0	•	5 6	1 1			2	2	,	3	09	63	5.	26	2.	MINUTE		COF	3		, ,	240	34	4.2		CUMULATIVE		K C0.	3	3.4	200	3.	3(32	
IN GNI			FOURIER		>	683	638	266	515				FOURI		>	689	599	634	509	165	OME		FOURIER		>	7 3	0 -	1 1	4.5		COM		FOURIE	>					H 7	
111116					ם	99	7	115	-31						D	6.5	34	94	2	32					0	T .	7 :	78	103					-	>	æ a	0	000	1001	
55110					ı	186.8	181.9	169.7	172.1					-	ī	186.8	184.5	179.8	179.9	178.2			-			7.5	7.6	12.2	10.1				-		-	7.5			0	
A >					SFEED	410	641	109	605						SPEFD	7	7 2 7	760	7.23	709					PEEU	33	73	7.3							SPEED	3	7	9 5	100	
				E A R S		100	7.4	5.5	105					PEAK'S				78	7 H	, t.			PEAKS		Y.	3.1	53	# 60	, a				PEAKS		z				# S	
				a.	>	602	743	500	250	-				1	,		112	1 40	711	969					>	4.5	52	80	19	0					>	2 h	40	7.1	43	-
	87 =				5	9.6	2.5	-174	7 6							> 0	0 7	70		- 6 -					ח	102	60	133	0	<u>.</u>					0				134	
	HE 1 GHT				2	-			.	n						-		, -		3 ~ 1	16				2	-	2	3	7	r					2 1 11		2	3	*	,

	0																																		
7:35	_		SP	5	53	6 7	6 7	5.7				92	65	2,4	7 7	2	53																		
START TIME	1 I M E		Ŧ	4	183.4	0	179.8	œ				ī	. 4 6	188.8	88	86.	185.5																		
STA	N N		SPEED	829	721	674	650	829		113		SPEED		775	738	717	669																		
0 6 CH		WAVE FIT	*	-12	91-	-23	4	-26		7 7 7 M				7	-17	-23	-24					I	29.7	•	• •	13.7				Ξ	29.7	21.0	16.8	17.1	16.4
CE		SINE	>	738	717	999	623	613		SINE		>	738	728	105	685	671			F11		SPEED	9 .		7 0	5.4			111	SPEED	4	08	88	τ	2
AINFORCE			כ	143	42	83	0	54				n	143	93	6 4	47	59			WAVE			æ :		1.7	3.2			FAVE			3.5	33	3.1	3.1
0115			30	28		2.1				-	•	30	9.2	23	23	23	22		SNI	SINE		>	246	0 :	T 0	09	v		SINE	>	266	183	151	137	124
176	ANS		20	3.1	23	54	22	56				20	31	2.7	26	25	25		DEVIATION			>	282	0 -	205	9 7	DEVIATION			Э	282	202	163	174	167
9/18/7	JTE MEAN	TENTS	ī	192.7	180.5	187.8	180.5	181.1	CUMULATIVE MEANS	LENTS		I	2 6	86	8 7	85	184.6		ANDARD DE	5		Ξ,			· x	15.1			5	ī	59.4	21.1	17.8	17.9	11.5
VAD	ONE MILUTE ME	CUEFFICIENTS	SPEEU	459	583	216	555	485	ULATIV	OEFFICIENTS		SPEED	459	619	603	165	570		5.1	DEFFICIENT		1	50		2 20	н7			000000000000000000000000000000000000000	141 141 141	115	3.6	11	43	93
1 0	ō	FUUNTER (7.	3.6	2	17	0,7	33	CUP	0 4314			36	2.1	61	5 4	56		MINUTE	COEFF			700		0 0	5	UMULATIVE		1 100	8	5.5	5 1	3.6	3.7	3.6
25 N		F 0.0	>	247	578	265	525	471		FOUR		>	297	588	519	566	548		ONE	OURIER	2	> 1	157	0 0	87	87	7 # 7 0		CORIER	,	231	154	121	119	-
1 1 1 1			D	88	7	16	9-	3				n	88	45	2.6	4.1	34			•	:		r a		190	126		•	•	>	130	± = =	128	143	134
01155		-	114	183.7	177.9	180.8	183.8	180.4		-		<u>1</u>	183.7	180.8	160.8	181.5	181.3			-			• •		9 -	10.			-	4.11	9 • 0	7.7	0.6		11.0
VAD			SPEED	640	732	700	9/9	652				SPEED	740	186	156	738	121				243	3	I	7.0	7.1	59				PEEL	19	11	6.3	9	E E
		PEAKS		36	0	1	œ.	5		PEARS			14	43	5.5	9.5	4.3			PEARS	307		7 7	0	52	8.8			C . W .	2	43	37	1 4	65	0
÷3.			>	637	123	7 7	1+9	643				>	637	087	748	124	708				5		2 0	10	, .	99		3			63	1.4	9.0	÷ #	0.6
,			5	5.4	62-	•	2.5	n				5	2.4	11	0	6.1	1.1				(1)	7.7	120	140	213	114				0	9.5	103	114	761	35
н£16н1			z E	-	2	7	7	2				z L	-	?			11	7			27		. 7	•	*	2				иТи	-	2	3		r

	7:40: 0			SP	47	7 7	43	43					SP	4.7	9	45	2 6																		
	START TIME END TIME			Ξ	7		•	195.2					I	182.9	7	7 0	190.8																		
.06	rs F	111		SPEE	2	70	- 0	155			F 1 T		5				618																		
o I		A V E						-15			MAVE	3		- 1		61-	- 8					I	7.	80 0		9.8				1		: .			: :
4 C.E.		SINE		> :	5 - 4	400	573	526			SINE	>				10	~			111		<u> </u>	0 1	2 '	- 3	31			F 1.1	PEED	2 1	-	107	100	90
AIRFOR				0	97	122		7				=	40	122	122	==	117			MAVE		3	17	2 - 2		23			AVE	5)	2.3	31	28	2.7
0115		-	4) (- 4		21	13		•	-	30			9	1.5	1.5	S		STHE	;	> :	0 7	1 8	9 9	6 1			8111E W	>	0	63	10	2.6	26
176	S		00	2 0	0 0		01	9				20	2.6	23	6	11	17	DEVIATION			-		5 7 7	122	48	9 8	DEVIATIONS			0	7.3	139	129	132	123
9/18/76	MIGUTE MEAN	ICLENTS	ī		0	189.0	œ	0	E MEANS	CLENTS		Ŧ	æ	190.4	189.8	189.8	0	STANDARD DE	,	,	1	1.3	20.01	10.8	13.0	1.6			_	Ŧ	7.2	12.7	11.7	11.7	11.3
VAD	ONE MIN	COLFFI	SPFFD		617	440	533	482	MULATIVE	OEFF!		5	458	530	583	571	553		FICTERT		PFFD	1	04	0.7	33	5.1	STALDARD		Clenis	E E D	5.1	9.6	105	96	5
1 (1	0	URIER			6 17	53	17	92	500	NIER C		3	~	23	35	31	30	MINUTE	COEFF		C		3.1	9!	•	3.9	ATIVE	230	5	3 5 6	9-	33	3.1	7.8	3.0
1 8 8 4 1		100	>	455	571	545	514	463		FOURIE		>	455	205	195	155	533	ONE	OURIER		>	5.0	19	4.5	37	5.5	CUMUL	7 711800		>	1 5	H 2	16	œ :	
11116			ū	18	514	105	9	511				n	œ <u>-</u>	101	901	201			0 4		0	65	107	126	6	11		F 111			in	30	NI	V .	
07155		-	H.	4	97.	190.3		•		-		1	184.9	190.6	500.	1.01			-		H	10.3	13.2	0 0	8.	1/•/				D	-	12.8			
VAO			SPEED	53.8	721	157	500	166				SPEED	7	~ .		n					H	2.0	15	25	, .	<u>.</u>				t.U	0 1		0 0 0	200	
		PEAKS		-31	93	9 :	0 0	,		PEAKS			5	7	0 0	2.5			EAKS		35	÷	19	0 4	65	ò		A K S		3 S P E	z r	0.0	. d	0	
2н.			>	525	5/9	7.30						> 3	200	244	630	100			2			0.0	9/		0 5	2		d		, d	1	5111	105	106	
E+1			9	64.3	517	o =	136					,	- "	121	-	IV					0	100		147	- 4					200	143	142	151	151	
HE 16			nIn.		, ,	7 7	I.S.				H Iv					.r	8			- 0		- 1	7 .	7	5								7	5	

7:40: 0			26	9.9	37	20	9.2	25				SP		90	,	8 7	52	*																		
START TIME END TIME			1	192.0	197.3	181.2	179.2	192.8				I		•	-	,	88.0																			
	11		STEED	539	160	685	409	9 0 9		F 1 T		SPEED	5	7 :		2	636																			
H 9	WAVE	3		•	-29	- 29	-13	œ -		WAVE F		x	- 7				- 6					I	30.8	÷	-		14.3				2	-	30.8	1.77	22.1	21.0
3	SINE	>	- 0	6	724	1 4 9	294	576		SINE		>	481	. 0	1 1	900	2 0 0			F11		PEE	104	7	5.7	106	31			111	4		70	2 -	<u>^</u>	9 7 0 -
A L A C B		:		6	556	33	-15	135				D	69	143		7.8	0 %			NA VE			80	23	38	1.2	52			MAVE	v	,	E .	9 0		25
0118	-		,	2 .	- :	17	-	21		-		30	23	2 1		200	21		S	SINE		>	183	7 4	В 3	8 &	30		•	SINE	>	C	2 4	u	0 :	127
47.		70		, .	D (77	7	*				70	31	25	24	26	97		DEVIATIONS			2	200	53	256	- + -	5 7		DEVIATIONS		0	2000	167	0.61		182
T VAD 9/18/76 ONE HINUTE MEANS	FFICIENTS	ī	-	3 0		9	1.411	•	E MEANS	1ENTS		I	189.8	191.5	188.1	186.0	186.9			5 1		I	31.4	3.6	23.5	£	13.2		NO DEV	-	ī	71.4	22.4	22.7	21.1	19.5
VAD ME MINE	COEFFIC	SPEFO		7 0	070	7 0 0	7	000	CUMULATIVE	COEFFICIENTS		SPEED	433	523	542	529	425		E STANDARD	FFICIENT		PEED	00	0.00	2 6	108	9		STANDARD	FFICIENTS		60	30	23	200	109
J	a W			, ,	2 2	, ,	, ,	3	5	OURTER C			54	52	58	20	20		MINUTE	COEFF		3	2 B	9	4	34	34		COHOLALIVE	COEFF	S	28	7	4.2	4.2	9
1 6 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FOUR	>	384	410		1 1 1	0 0			F 0 U	*		384	489	508	167	464		ONE	0081ER		> .	751		16	102	6.5		70107	SUBTER	>	152	9	150	138	571
Ĭ.		D	+	145	24		. u						7	6.8	64	2.0	5.8			Ĭ.			5/1	-	218	133	+			0	0	175	138	164	158	5
07155	-	H.	183.9	193.2	4 - 1 6 1	9.50				-	7		183.9	188.2	140.3	190.6	190.0			1.		= :	1.71	0.0	100	31.9	10.3			=	ī	12.1	10.5	12.2	18.1	16.6
× ×		CBTAS	015	783	50	2 4 3	7 0				-		-	•	1	668	•				4 4 9 0		10,	0 :	* * *	061	25				6.60	16	136	112	511	.01
	PEAKS	*	6	11	103	+	н 3			FAK S	×	2		7	9	r	63			PEAX5	3	1			, ,	0 :				EAKS	¥ 5P	96	r	B B	- e	10
		>	55H	151	250	576	634				>	FFR	000	50	65.3	634	6.34			1		80		,		7. 7	0			a	,	0	131	0	*	~
		n	34	181	1.16	* *	H 7				n	7		7111	113	107	103				7) ==	- 17	- 3	-		me.				2	-	177	3	154	4.4
HE 16.		212		2	3	,	5				HIN	1				- !	1	9			N I E	-		, ,	7						NIM		7	3	7	ď

00																															
7:45:		SP	42	32	24	7 -	33			SP	42	37	33	35	35																
START TIME END TIME		ī	186.0	103.6	179.0	176.6	186.5			ī	186.0	189.8	186.2	183.8																	
	-	SPEED	ac				668		-1	SPEED	528	8 4 9	269	693	8																
0 6 QH	WAVE FIT	3		- 29	- 4	- 32	-43		WAVE FIT	3	61-	-24	-36	- 35	-3/			ī	12.6	8.5	1.9	13.0	4.1			ī	12.6	1.0		12.1	
9	SINE	>	5 4	742	776	678	659		SINE	>	514	628	677	677	٤/٩		111	SPEED	45	6	4 6	69	25		111	SPEEU	42	143	134	108	
AIHFORCE							16			5	55	114	7.5	m :	50		WAVE			26	53	13	3.		MAVE					35	
0115	-						16		-					26		540	SINE	>	38	108	15	7 4	25	S	SINE	>	38	142	138	123	
/7 6 NS		20	23	, u	2 2	3 -	1.5	v		20	23	34	34	34	۲,	EVIATI	_	>	119	4.5	103	151	2	VIATIO	-	0	6	118	126	139	
T VAD 9718776 ONE MIGUTE MEANS	IENTS	Ī	184.4	197.4	176.H	177.8	185.9	CUMULATIVE MEANS	TENTS	H	184.4	191.0	186.3	184.2	•	MINUTE STANDARD DEVIATIONS		ī	11.3	7	15.3	10.8	4	CHMULATIVE STANDARD DEVIATIONS	s	ī	11.3	- 4	15.7	13.7	
VAD ME HILL	FOURIER COEFFICIENTS	SPFFD	443	0 7	7 7	2 2	571	MULATIV	OURIER COEFFICIENTS	SPEED	463	505	255	549	554	TE STAN	COEFFICIENTS	SPEED	58	26	15	136	11	E STANC	COFFFICIENTS	SPEED	23	9	89	0 0	
J	HIER O			2.1		7	2.0	Ď	HIER			52	36	96	-					27	4	3.1	30	LATIV						3,4	
2 Z	F 0 U	>	454	5117	424	2 3 5	195		FOU	>	+ 5 +	480	523	524	536	ONE	FOURTER	>	52	5.4	5.5	139	7.2	COMO	FOURTER	>	25	15	18	0 0	
1 1 4 5		-	15	145	1 34	-	5.8			ם	35	100	5.5	33	.			>	6 4	137	171	ВЗ	9.0			>	93	131	155	1 4 4	1
01155	-	1	182.7	0	175.7	2 2 2 2	190.3		-	1	182.7	189.8	185.1	185.1	7.98		1	==	16.1	13.2	8.5	55.4	6.3		-	ī	1.91	15.9	15.2	16.8	
VAD		04445	25	745	110	5 5 6	673			SPEED	244	959	643	÷ 0	200			PEED		99	4.7	16	6.5			SPEED	1 5	121	113	112	
	PEAKS				127		9.5		PEAKS		2.2	2.5	11	6.9	22		PEARS	45	7.2	7.5	7 4	14	-		FE415	\$	7.5	11	0 4	77	
. 97		>	575	1	141		929			>	575	179	668	000	700			>	3.7	5	5.3	136	,			,	3.7	1.20	771	127	
		-	3.0	214		3	- 1			n	30	152	63	x -	"			5	153	191	109	233	104			5	153	178	178	187	
п£ 1 сн 1		2 2					10			ulu	-			- 1	20			212	-	?	3	*	in			2 1	-	7	٠:	7 Ji	

7:45: 0		SP	52	7	24	37	215			SP	52	4.7	3.8	38	0,														
START TIME END TIME		ī	179.8	192.0	184.5	183.5	6.481			ī	179.8	185.9	185.4	184.9	184.9														
	F11	SPEED	588	842	8 7 80	702	674		111	SPEED	588	715	764	149	735														
	WAVE	x	9-	-53	-58	-28	-13		WAVE F	3		-29						ī	16.8	5.7	5 . 6				ī	8.4	13.6		
	SINE	>	568	821	842	701	663		SINE	>	568	6 9 4	149	737	723		F17	SPEED	1	39	7	4 4		111	SPEED	8	147	136	
		5	c o	173	99	42	15			0	Œ	0.5	8	12	æ		WAVE			37	5.0		•	MAVE		20	37	77	
	-	30	1 6	26			23		-	30	9-	2.1	1 9	6	6-	28	SINE	>	06	60	4.5	47	n	SINE	>	06	6 1 1		
s		20	22	31	=	13	28			20	22	97	71	61	71	VIATIO		2	1 6 4	19	8	- -	UEVIATIONS		>	164	150	133	
ONE MINUTE MEANS	16475	ī	175.7	185.4	184.4	186.3	186.4	CUMULATIVE MEANS	IENTS	ī	175.7	180.6	185.0	183.0	183.7	MINUTE STANDARD DEVIATIONS	1 5	ī	18.7	13.1	7.8			2	ī	18.7	16.2		
E MINU	COEFFICIENTS	SPEED		049	732	607	538	UL A 1 1 V	COEFF ICIENTS	0		569	629	624	607	E STAN	COEFFICIENT	PEFD	ı	5.9	3.2	7.7	S	COEFFICIENT	SPEED	-	100	3	
5	OURIER		1	23	28	7	32	Ď	œ	3		15	31	33	33	HINUT	COEFF	3		3.7	36	E 7	CUMULATIVE	COEFF		34	3.4	3	
	1001	>	474	623	724	602	523		FOURIE	>	474	550	+ 19	119	264	ONE	OURIER	>	8 6	79	5.3	t 0	10 # 00	OURIER	>	84	105	121	
		n	-20	5.7	2.4	65	69			ם	-20	18	3.2	0 ;	7		•	2	157	145	101	9 - 7			2	151	150	112	
	-	ī	191.1	187.3	9.58	187.1	175.6		-	ī	191.1	189.2	188.0	187.8	185.4			11	12.8		7.5	2.0		-	1.1	12.8	11.7	10.1	
		SPEED	647	837	846	171	54.0			SPEED	140	145	180	767	153			SPEED	101	5.4	09	7 5			SPEED	101	171	114	
	PEAKS		47	0 1	11	5.3	Ŧ		PEAKS		41	ā	47	1.			PEAKS	15	11	8	6.5	7 0		PEAKS	5	11	7.1	T	
43.		,	079	2	98.9	11.9	199		-	•	079	710	101	151	136				0.	3.7	5	7.			>	9.0	121	118	
"		17	170	106	r a	06	14-			-	176	116	+01	101	17			>	154	791	101	123			ס	154	151	134	
н£ 1 см 1		2 0	-	~	•	,	5			nln	-			- 1	م 21			212	-	7	•	· u			z E	-	7	3	

7:50: 0		9		,	39	39	25	88			SP	47	£ 3	4.2	38	35																
START TIME END TIME		1		0.00	184.4	187.9	182.4	176.3			ī		82	184.5	2	~																
FNE	1.1	0		0/6	569	677	664	584		F11	SPEED		632	649	259	637																
	WAVE FI	3		•	-38	1 4 8	-50	-25		WAVE F			-26	-34	- 34	- 35				I	11.8	3.5	12.9	5. Y			?		- 8		6.01	
	SINE	>		200	692	658	199	577		SINE	>	1995	626	638	643	629			F11	SPEEU	32	4.5	5 2	28		=	03300	0 1	32	· a	00	
			,	•	51	8.2	27	-37			Þ	0	30	4	7	56			WAVE F			27	53	21		N A V E			1 - 2	27	17	
	-		,	67	7 -	7	1.2	:=		-	30	2.3	6	1.7	9	15	Ų		SIME	>	36	x	01	28		SINE			90	. a	C	
ın		90		0	18	6-	12	9			20	œ	8	18	1.1	17				>	÷ = =	3.8	135	6 6 5 5	1 A 1 1 0 M		-	0	- z		00	
MINUTE HEANS	ENTS	3		1.181	184.8	5.981	183.2	175.6	CUMULATIVE MEANS	ENTS	ı	181.7	183.3	184.5	7 . 181	182.3	2000	0 0 0 0	s 1	I	16.0	5•1	. 4.3	9.0	STA DARU DEVIATIONS	5			7.5		/	
H LUC	COEFFICIENTS	3.50						522	JLAT 1 VE	CUEFFICIENTS	PEED	6 1 4		554	558	250			COEFFICIENT	PEEU	8 7	19	0 6	9 7 7		ICIEST		L.	æ 6	3 0	76	
ONE	OUNIER CO	-	0	52	4.3	7 9	4	7	CUMU	FOURIER CO	S		34	4.5	20	Œ		0.1	C 0 E F F	0,				30	>	COEFF		2	26		3.4	
	FOUR	,		442	595	573	240	5 - 4		FOUF	>	5 4 4 5	520	245		1 + 5		3 2 0	UURIER	>	5.8	99	66	4 4	COMUL	OURIER COEFFICIEST	3	>	T 0		100	
			0	12	51	5.4		- 0			0	1.3	3.1	0 7	3.6	21			•	2	118	5	126	2 00				2	a :		701	
	-		Ι.	175.7	190.3	184.9	1811	180.9		-	ĭ	-	Œ	183.7	α	182.5			-	H	18.7	5.9	3.8	9.7		=		Ξ.	18.7			
				285	705	16.9		5.95			SPEED		7 0	140	299	0				PEED	52	4	a .	, ,				2	52	2 .	9	
	PEAKS			16	82	125	. 0	53		PEAKS		,	- 7	11	<u>-</u>	75			PEAKS	5	.55	15	2.5	0.9		r. A. S		Λ	5 4	2 2 4		
•				555	693	100	1114	369			>	565	624	26.9	2,0	635				>	30	9.0	11	2 7					30	0 0		
			7	75.	125	3	. 0	۵			0	1.11	7,5	6.6	3.6	3.2				0	187		2	164					187	001	67	
n£ 1641		- 9	212	***	2		, ,	r as			2 E		. 2	m.			22			2 1	-	7	3	T di				27			3	

7:56: 0			SP	43	50	65	40	0 7				SP	43	4 6	50	7 :	0															
START TIME END TIME				186.3								Ŧ	186.3	185.9	183.0	182.6	8.181															
		-1	SPEED	643	619	657	643	584		•	_	SPEED	643	099	659	659	70				2	0	80 *	• 0					2	~ 0	с .	v v
06 QH		WAVE FIT	3	6-	-28	-16	-37	-75			MAVE FI	3	6-	- 3	-17	-22	-23			Ŧ	8	01	15.	11.0				Ē	8.2	8.7		10.5
		SINE	>	634	899	637	639	515			SINE	>	634	650	9 4 9	5 5 6	631		F11	SPEED	7	53	101	4 7		113		SPEEU	- i	7	10	67
AIRFORCE			D	7.0	65	-28	15	-15				D	7.0	9	35	30	21		MAVE					0 H		2 0 0			2 B	2 8	2,2	25
0115 A		-	30	2.0	8	2.1	7	1 2		•	-	30	20	0 1	50	8-	8 -	5.2	SINE	>	- 7	19	= :	25	v	a l	1	>	-	25	2 ,	7 -
			20	23	2.1	77	1.1	0.7				20	23	7.7	73	22	71	DEVIATIONS		0	16	112	167	108	2			o.	16	67	171	113
9/18/76	ONE MINUTE MEANS	LENTS	ī					174.5	CUMULATIVE MEANS		ENTS	ī	186.2	186.2	182.3	181.5	180.2	STANDARD DEV	2 1	T	13.3	10.5	17.4	12.9	2 A A A A A A A A A A A A A A A A A A A	-	-	111	13.3	9.1.		13.0
VAU	UMINU 3	COEFFICIENTS	SPEFD					511	ULATIV		FOURIER COEFFICIENTS	SPEED	531	551	550	989	548		COEFFICIENTS	PEED	5.8	20	4.4	# T	,	1		SPEEU	58	57	19	a t
Ü	0 0		3		21	22	. 5	33	CUM		S H E H			-	1 4	5.8	54	MINUTE		5	4.3	0 +	53	e + c	20 10 10 10 10 10 10 10 10 10 10 10 10 10	1						4 m
11ME 14 GMT		FOURTER	>	617	243	525	269	664			FOUR	>	217	538	534	544	535	O NO	FOURIER	>	69	5.6	11	50	5	-	1 1 1 1 1 1	>	64	45	67	÷ ~
11.12			=	0	2 4	- 2	2 00	7				Þ	0	52	20	~	-		•	2	115	103	162	100			•	2	115	105	130	11.8
01155				1 101		000		179.9			-	ī	187.7	86.8	187.5	188.2	186.4		-	I	11.3	13.7	7.4	0.4	•		-	7.1	11.3	11.9	11.0	10.01
Q 4 >			01105					614				0 4 4 4 5	200	1	649	681	860			0.4.4.0	4.3	7.0	13	7 74	ī.			SPEED	£ 4	55	6.5	6.5
		2.5			,,	2 .	201	3.4			PEAKS			2 5	7.1		7.3		PEARS	5	1.5	6.7	3.0	7 3	,		P.F. A.F. S	57	6.3	4.7	79	\$ 0 \$
		3,4	7		140	110	200	607			4	>			210	663	653		2	,	3.4	3	3.1	9 3	2			,	3.4	99	7.1	72
7								2 -				-	0 0	200	87	1.6	14			2	135	7+1	100	127	n			-	135	133	122	120
n£19#1								run				2		- 0		3 -	s 12	3		2	-	. 7	6	,	n			1111	-	7	9	t 5

7:55: 0		•	33	24	38	•-	20			SP	33	29	31	30																	
START TIME BEEND TIME B		7 4 5					188.4				0		180.4																		
STA END	=	SPEED					989		-1	SPEED	588	579	295	563	000																
0	WAVE FIT		-57	-23	-25	-30	- 35		WAVE FIT				-34					Ē	11.5	6.3	19.2					ĭ	11.5	0.6	12.6	8.14	
#	SINE	>	578	568	503	178	619		SINE	>	578	573	155	554	100		F11	SPEED	7.0	33	75	62			F11	SPEED	7.0	25	7 9	0.9	
AINFORCE		0	31	~	0	4.7	100			>	31	01	_	7 7	<u>•</u>		MAVE	3	58	1.6	31				WAVE	3	56	58	53	27	
0115	-	30	1.7	13	91	58	11		-	30	1.1	-	51		-	SNO	SINE	>	4	34	104	50		0	SINE	>	4	59	0 8	75	
7 s		20	54	1.5	20	2.1	5.5			20	54	1 9	61	20	7	VIATIO		n	100	62	14.	• 0				>	100	8	66	63	
T VAD 9/18/76 ONE MINUTE HEANS	IENTS	Ŧ	84.9	179.9	176.7	182.3	188.1	CUMULATIVE MEANS	TENTS	ī	184.9	182.2	180.4	180.7	0.181	STANDARD DEVIATION	1 51	ī	13.8	7.1	18.2	<u>·</u>	•	STAUDARD DEVIALIONS		ī	13.8	10.8	13.3	12.3	
VAD MINU	CUEFF ICIENTS	SPEFU	505	5.20	1 7	495	999	10LA11	FUURIER COEFFICIENTS	SPEED	505	513	190	- 0	*	TE STAP	COEFFICIENTS	SPEED	67	88	18	3 C			COEFFICIENTS	SPEEU	19	8	67	62	
U	FOURTER			8		9 1		ð	HIER C		7.9	80	1	5 0	÷	HINUTE						37		COMOLATIVE			4	35	35	36	
1N GH1	100	>	607		47.	495	299		FUU	>	493	505	480	482	0	ONE	FOURIER	>	8	26	86	ur o	=	0 4 0 3	FOURIER	>	8	5.7	19	7.4	
1146		2	30	; ;	, ,	20	9.5			>	35	15	•	D :	<u>*</u>			>	106	11	108	01	•		•	>	106	8.7	16	8.5	
95110	-	1		140.5	. 0	176.3	196.8		-	ī	179.3	179.3	182.5	181.6	182.3		-	ī	15.1	8.2	17.0	5.7	•		-	ī	12.1	0.7	12.3	12.3	
VAD		03348		700	2 2 0	27.5	5 0			SPEED	602	588	570	570	575			SPEED	97	1	0.9	58	5			SPEED	4	4.5	2.0	25	
	PEARS	3			1	7	13		PEAKS	3		9.6	88	86	8 2		FEAKS	×.	S	38	5.8	7	9		PEAKS	\$	65	6.5	7.9	09	
		,		0	200	0 4	3 0			>	290	580	555	145	205			>	7	7	7	87				>	•	34	9.4	15	100
			,	0 1	0 0	: :	500			ס	•		23	15	52			0	132	83	163	2.5	0			n	132	103	123	123	
HE 1641		-			, .	7				z E	-	. 2	B		s 124			2	-	7	٦	7	r			z	-	. 7	3	*	

°.																														
7:55: 8: 0: 0		;	45		,		30			å		7	;	38	36															
START TIME END TIME			- 0	24.4		182.5	191.2			=	. 001	183.3	183.9	183.6	185.0															
	-		57550	2 0 0	500	909	695		=	SPEE	603	589	581	586	403															
0 6 0 H	WAVE FIT						-26		WAVE FIT	3	A 2 -	-23	- 24	-31	-30			ī	16.8	6.9	8 . 1	11.0			I	16.8	14.3	12.3		
3	SINE		945	0 0	100	5.98	671		SINE	>	5.68	574	569	576	594		FIT	SPEED	7.1	35	2.0	28		F11	SPEEU	7.	55	55	0 0 2 4	,
AIHFORCE							131			=	10	2	33	30	4		WAVE	3	28	•	25	7 6		FAVE	3	28	21	22	30	,
0115	Ī	;	33	3 -		9 6	39		-	~		20				SNO	SINE	>	901	36	29	43	S	SINE	>	901	47	7.5	7 7	
477	2		2 0	200	7 7 7	37	29	ď		20	28	29	2.7	53	34	EVIATI	_	2	7 7 7	99	74	129	0 4 7	_	Э	1 4 4	126	601	101	:
9/18/7	TENTS		7 4 4	1 2 2 2	184.1	173.1	189.2	E MEAN	STNTE	Ī	186.6	180.6	182.6	180.4	182.0	STANDARD DEVIATIONS	s	I	17.8	8.2	90 u	15.0	AKU UE	s.	I	17.8	15.2	13.3	13.5	
۷ ۸ ۷	FOURTER COEFFICIENTS		410		1 2	5 4 9	576	CUMULATIVE MEANS	COEFFICIENTS	SPFFU	410	478	475	492	508		COEFFICIENTS	SPEED	19	25	- 4	9 60	COMPLATIVE STANDARD DEVIATIONS	COFFFICIENT	SPEEU	19	9 5	79	200	
Gn7 CT	UKIER		3 7					C	FOURTER			30	50	2 H	56	MINUTE			7	33	0 7	4 5	LATIV			7	36	31	36	
<u>z</u>	0 4	,	> 1	10.7	440	539	555		F01	>	45.0	197	463	181	402	014E	FOURIER	>	96	5	6.9	106	200	FOURTER	>	90	5/	7 ;	2 2	1
11 14		:		2 2	7 7	-71	7.5			0	4		13	9-	۰			>	134	12	63	129							701	
01155	-		- 0	7	1 7 9	192.1	186.1		-	1	C. HAI	86.4	183.9	185.8	185.9		-	Ŧ	10.	0.8	100	21.9		-	ī	10.) ·			
VAD			SPEED	500	27.4	0.75	643			SPEED	200	544	165	665	4 4			PEL	16	55	1 7	t 2			PEE	16	50.	r -	- I	
	PEARS		. 0	3.0	7.	112	78		PEAKS	3	0.6	8	80	9.7	c I		PEAKS	S	63	53	70	118		PE AR S	S	6.3	;	0 0	71	
			. 0	0 0	273	511	140			>	065	583	584	585	504			>	18	19	7 7	5.4			>	87	57	5 0	918	
•		:	2 4	3		117	16			0	16	19	3.7	5.4	58			כ	41	16	791	256			ס	0	æ 6	r -		
п£ 16и1						, ,	5			21.0	-	. 7			ه 125			2 1 1	-	2	~ *	5			иІи	-	, .	2 2	·w	

Appendix C

TABULAR DATA FOR WIND MEASURED IN LOW CLOUD CONDITIONS AT LOCKHEED MISSILES & SPACE COMPANY, HUNTSVILLE, ALABAMA, ON 7 DECEMBER 1976

9:45:19		SP	67	101	86	43	70				SP	67	1.0	88	00	7.8															
START TIME END TIME		ī	311.8	306.3	338.2	318.0	321.5				ĭ	311.8	309.9	321.3	320.7	320.4															
	-	SPEED	899	179	818	832	876			-1-	SPEED	889	859	843	1 5 6	058					•		. ~					2		•	
HD270.	SINE WAVE FIT	2	-21	-52	-35	-47	-57			WAVE FIT	3	-21	-31	-33	- 35	7			Ŧ	•	•	.67				F	.1	÷	5.6		-
	3 N I S	>	665	194	731	919	989			SINE	>	299	553	429	623	639		F 1.1	SPEED	53	0 :		2 5		111	SPEED	53	10	4 5	,	5
11.6 41.4		2	-670	-627	-281	-556	-545				2	-670	959-	-504	-514	-525		WAVE FIT	3	2	0	97	2		WAVE	3	2	9	6 .	0 0	-
HUNTSVILE	-	30	0	8	-	•	1.3			-	30	۰	12	20	17	17	5 2 0	SINE	>	27	0	191	0 0	5.	SINE	>	27	8.2	139	125	•01
4 8		20	60	26	35	s	23				20	œ	7	23	20	21	DEVIATIONS		b	47	0	487	=	114110	_	5	47	-	252	127	7.1
VAD 12/07/76 ONE HILUTE MEANS	CIENTS	ī	309.2	312.3	338.4	315.2	316.0	CUMBLATIVE MEANS		CIFNTS	Ŧ	309.2	310.2	321.5	320.5	319.3	NDARD DE	15	ī	4.0	0.	73.5		CUMULATIVE STANDARD DEVIATIONS	s	I	0.4	3.4	9.61	17.7	
VAD ME HIP	COEFFICIENTS	SPEED	91.9	6 15	623	793	109	HULATI		COEFFICIFNTS	SPEED	819	757	104	119	116	MINUTE STANDARD	COEFFICIENTS	SPEED	5.0	0	104) # 0	E STAR	COEFFICIENT	SPEED	5.9	1 . 4	122	5 !	103
ō	FOURTER			16	. ~	45	8	3	,	FOURIER			3.						*	œ	0	5 (15	ULATIV	H COEF	3	•	20	34	- :	31
	100	>	218		. 44	263	503			101	>	515	987	217	524	125	ONE	FOURIER	>	1	0	061	55	F 0 5	FOURTE	>	1	20	110	001	2
		=	14.4-	2 4 2	0	-556	7445				>	-634	-579	-426	8771	-459			>	8.2	0	196	92 0			>	82	1112	5+4	224	141
HREC2	-	11.	324.1	326.2	350.5	124.5	322.8			-	ī	324.1	322.8	322.8	323.0	323.0		-	Ξ	11.2	0.	16.6	3.0		Ī	I	11.2	8.2	-0-	- 1	6.
0 4 >		0 1 1 0 0	2 2 3		0 -	8 7 0	5				SPEED	708	864	845	8 46	647			SPEEC	49	Э	11	30			SPEEU	7 0	6.8	67	09	25
	PEAKS			200	707	112	176			PEAKS		,	126	132	128	0.4		PEAKS	×	61	0	2.5	2 4		PLAKS		6 1	110	10	7.1	9
30.		3		517	070	200	010				>	713	799	999	019	719			>	15	0	503	20			>	15	9	113	102	00
		:		575-	010	100	- 116-				7	-623	-520	-505	-500	-503			2	111	0	1 4 1	2 .			כ	111	126	116	50-	30 30
HE 16H1		3			~ ~	7 7	· s				2	-	. 7		, J-				Z	-	2	7	7 10			Z	-	2	•	7	S

9:45:19		9 4	9	136	55			SP	1	6 5	8 8	0.80														
START TIME END TIME		1H 326.5	330.3	12.0	323.6			Ŧ	326.5	345.5	347.0	341.2														
	-	SPEED 973	927	732	671			SPEED	973	921	068	985														
но270.	SINE WAVE FIT		-73	7 6	-73		WAVE FIT	3		1 1 6 4	65-	79-			H	3.0	• • •		2.3			ī	3.0	3.0	45.9	40.3
;	SINE	> =	908	342	200		SINE	>	811	645	657	9		111	SPEED	35	0 5		7.		F11	SPEED	35	37	105	4
v 1 L E A		-536	-458	80 37	-516			>	-536	-302	-263	-326		WAVE FIT	3	•	0 4		e		WAVE	3	•	0 4	0 00	1.7
HUNTSVILE	-	•	6				-	30	8 .	2 4 2	56	20	SNO	SINE	>	7	0 277	0	39	or.	SINE	>	7	347	242	206
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		22			. ~	S		20	22	27	52	-	EVIATI	_	>	-	0 901	3	1.1	VIATIO	_	>	79	63	550	780
12/07/76 JTE HEANS	STNTE	1H 324.7	324.1	152.7	321.4	E MEAN	IENTS	ĭ	324.7	341.5	343.3	33/•8	STANDARD DEVIATIONS	Z.	Ŧ	. 1	2 3	•	2.1	AND DE	5	ī	.,	9.6	47.3	41.2
VAD 12/07/ ONE MINUTE HEAN	COEFFICIENTS	SPEED 808	918	659	823	CUMULATIVE MEANS	COEFFICIENTS	SPEED	808	910	741	161		COEFFICIENT	SPEED	147	o 1	0	108	CUMULATIVE STANDARD DEVIATIONS	COEFFICIENTS	SPEED	147	101	102	103
0	FOURTER		98	m 4	11	5	FOURIER	*	50	2 7 2	36	4	E MINUTE		3	36	0 %	0	2	ULATIV		3	36	5 7 7	1 5	45
	0	> 099	099	260	7		0	>	099	200	531	554	ONE	FOURIER	>	126	0 00	0	0.9	E O U	FOURIER	>	126	980	224	161
		2 4 2 6 5	-478	22	-515			0	-465	-272	745-	3.0			Э	16	9.50	20	6			>	16	100	4.50	404
HRECZ	-	1H 332.2	330.8	320.3	323.8		-	ĭ	332.2	331.7	323.5	23.		-	ī	3.4	0.4	0	10.7		-	ī	3.4	2.5	12.7	11.5
>		SPEED	246	506	90			SPEED	447	929	893	769			PEED	01	0 :	0	16			PEED	10	30 G	0 -	8.2
	PEAKS	3 6	47	132	9 9 9		PEAKS		0 8	201	0	128		PEAKS	S	67	0 7	0	69		PEAKS		19	4 4 8	4 5	5.7
. 5		937	822	0 0 0	715			>	637	173	+17	-			>	35	182	0	159			>	35	26	183	166
		D 7 7 1	458	-563	-515			כ	0 + + -	1 1 4 6 7 6 9	-508	405-			D	4.5	167	0	00			כ	4.5	33	103	0
HE 1 GHT		z -	7	m 3	· w			Z E	- (т. С-				z I	-	2 6	, ,	v.			z x	-	7) 3	2

61:05:6			SP	7	33	59	4.3	: <u>=</u>			SP	;	•														
END TIME			I	322.6	330.0	305.9	128.7	333.2			ī	322.6	325.1		322.8												
N N	_	1	SPEED	987	296	922	882	882		-	SPEED	487	979	9 3	929												
	WAVE FIT			-59	-51	-37	0.5	8 -		SINE WAVE FIT	3	-59	-54		1 2			ĭ	9.5	•	3.7				ī	9.5	
	SINE		>	176	834	539	154	7.85		SINE	>	776	795	200	724		11	SPEED	54	0 (0 0	7.6			SPEED	54	=
			>	-598	-480	-746	-467	1400			>	-598	-559	500	-553		WAVE	1	*	0	52	95		WAVE	1	7	ď
	-		30	1.8	•	32	11	30		-	30	8-	7	7 22	24	SNO	SINE	>	57	0 ;	9 3	36	so.	SINE	>	57	6.3
SN			20	61	•	32	0	5.4	s		20	19	51	77	22	EVIATI	_	>	163	0	3	6	V I A 1 10	_	5	163	100
ONE HINUTE MEANS	IENTS		I	321.7	325.4	303.5	331.0	333.6	CUMBLATIVE MEANS	IENTS	ī	321.7	323.0	2.515	321.8	STANDARD DEVIATIONS		ī	12.3	0.	.01		STANDARD DEVIATIONS	s	ī	12.3	
ME HINU	COEFFICIENTS		SPEED					752	HELATIV	OUNIER COEFFICIENTS	SPEED	835	198	187	763		COEFFICIENTS	SPEED	120	0	98	, 0	STAND	COEFFICIENTS	SPEED	120	
ó	FOURTER			27	16	-33	0	115	5	HIER		27	43	7 .	17	MINUTE		3		0	7 8	œ <u>-</u>	CUMULATIVE			5.7	0 1
	100		>	959	159	361		0740		101	>	959	069	555	592	ONE	FOURTER	>	504	0	5 8 2	4) H O O	FOURIER	>	204	
			>	-500	-523	-550	-325	-332			>	-500	-507	525-	-452			>	67	0	3 0	ט ע			>	67	0
	-		I	316.1	325.3	303.9		328.9		1	ī	-	319.2	-	320.5		-	Ŧ	12.0	0.	6.2	32.4		-	ī	12.0	
			SPEED	196	096	100		826			SPEED	196	596	436	0006			w	~	0	19	101			PEE	3	2.2
	PEAKS			7.8	101	00		215		PEAKS		7.8	86	£ .	122		PEAKS	3	4	0	30	51		PEAKS		3.4	2
			>	989	190	100		9 9			>	686	721	0 6 9	663			>	113	0		314			,	113	001
			5	-665	1545	-740		-368			>	-665	-625	10	-247			0	171	0	105	345			>	171	
			Z	-	2	. ~		* 0			z	-	2	٠:	r 10			Z E	***	2	٠:	. 72			z	-	

9115119																														
•			SP	25	2.4	4 t 8	5.5				SP	55	80 1	66	20															
START TIME			I	327.8	324.1	324.8	328.0				Ŧ	327.8	325.3	3.55.6	327.0															
		-	SPEED	484	196	929	863		-		SPEED	186	972	701	934															
HD270.		WAVE FIT	3	15.	-3/	- 36	-28		WAVE FIT		3	-54	- 42	7 7	.33			F	•	12.6	9.9	•			ī	•	6.5	7.5	7 • 0	
464.		SINE	>	633	116	760	732		SINE		>	833	795	0 0	780		F11	SPEED	0	98	36	0		F 1 T	SPEED	0	5 8	32	38	,
			>	-523	-256	-534	-457)	-523	-545	7+5-	-504		MAVE	3	0	• 0	-	0		WAVE	*	0	1 5	0 7	± :	٢1
HUNTSVILE		-	30	22	56	29	5 9		-	•	30	22	52	97	52	SNO	SINE	>	0	155	00		5	SINE	>	0	* -	95	e e	0/
92.	5		20	34	58	28	25				20	34	30	47	78	DEVIATIONS	_	Þ	0	6 7 0	7.	0	1 A T 1 O		>	0	101	30 0	D 0	T D
12/07/76	ONE MINUTE MEANS	TENTS	ī	316.7	316.6	324.4	323.7	CUMULATIVE MEANS	TENTS		I	316.7	318.8	371.5	322.1	STANDARD DE	S	H	0.	9.6	4.7	0.	STANDARD DEVIATIONS	1 51	ī	0.	7.0	7.8	*	9
0 4 >	NE MILL	COEFFICIENTS	SPEED	637	736	702	633	HULATI	COFFFICIENTS		SPEED	637	703	103	679		COEFFICIENT	SPEED	0	6 0	, e	,0		COEFFICIENTS	SPEED	0	9 60	11	7.5	49
	0	FOURTER	3	-67	35	-31	1 20	5	FOURIER		3	-67	-	0 :		MINUTE		3	0	0,00	110	0	CUMULATIVE		3	0	7.8	99	1.	19
		104	>	463	264	* 0 9	510		104		>	463	531	2.5	535	ONE	FOURTER	>	0	150	134	0	CUM	FOURTER	>	0	121	501	102	÷
			>	-435	7 0 7 1	-357	1374				>	-435	+5+-	0 .	1410			>	0	5 C	36	0			>	0	58	5.4	20	,
HKEC2		-	ĭ	312.3	321.5	327.8	338.0			•	Ŧ	312.3	318.4	320.8	323.8		-	ī	0.	18.2	0 00	0.		-	ī	0.	13.9	12.3	0 :	
9			SPEED	921	7 7 7	929	***				SPEED	921	936	+ 6 +	934			SPEED	0	20	3	0			SPEED	0	38	3.1	32	30
		PEAKS		100	93	134	133		PIAKS		1	100	9.5	501	9 0		PFAKS	3	0	℃ C	24	0		PEAKS		0	32	3.2	0 0	0+
• 0,6			>	0	175	783	876				>	619	069	113	147			>	0	273	7	0			>	0	101	9+1	9 -	171
)	089-	995-	764-	1991				>	089-	+09-	-576	1240			0	0	202	•				5	0	151	140	126	-
нЕ 16н1			z I	-	~	7:	* v				z r	-	2		- un			z E	-	7 "	7	'n			z E	-	2	٠:	5 1	n

- •																																
9:45:19		SP	37	3.6		205	53				SP	37	37	7	J	2.																
START TIME END TIME		ĭ	324.8	319.5	333 6	329.2	325.5				ī	324.8	321.3	324.1	325.8	325.8																
STA END	<u>-</u>	SPEED					922			F11	SPEED	1000	1008	100	963	457												_		•		0
HD270	WAVE FIT		-51	1	7.		-47			WAVE F	3	-51	-50	9 7 -	- 45	- 45				ĭ	•	20.3	, ,				I	•		13.2	10.	10.0
	SINE	>	817	750	2 2	773	159			SINE	>	817	112	190	784	781		111		SPEED	0	87	21	0		114	SPEED	0	2.1	34	55	53
		2	-675		750	1 1 1 1 1 1	-521				Э	-575	-613	-569	-532	-531		N V V		3	0	2	, ~	0		WAVE		0	2.0	1.8	-	13
HUNTSVILE	-	9	-	, ;	• *	,	2 =			-	30	3	1 8	1 5	17	9	SMO	SINF		>	0	251) u	0	SNS	SINE	>	0	1 R 2	153	122	112
9 S Z		2.0			,	200	2 2	v	,		20	1	22	- 8	61	1.7	DEVIATIONS			כ		253	,		EV 1.4112	-	>	0		172		
12/07/76 TE MEANS	ENTS	1	131.4	0 . 1 . 5	31/03	330.1	372.6	1		TENTS	ĭ	321.6	318.7	321.6	322.8	322.8	STANDARD C		,	H.	0.	26.2		0.	STAHDARD DEVIATIONS	1.5	ĭ	0.	10	16.3	14.0	12.7
VAD 12/U7/7	COEFFICIENT	0 2 3 0 3	200		780	613	888	2 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		FOURIER COEFFICIENTS	SPEED		845	8 6 2	918	978		THEFT		SPEED	0	53	2	00		COEFFICIENTS	SPEEU	0	-	66	108	102
é	OUKIER			2 .	7	0 0	. 69	5	3	URIER			5.3	2.1	7	3	E MINUTE	300	,	3	0	11	,	0	CUMULATIVE		3	0	2	5	15	47
	10.	,	. ;	101	00 T	161	264			101	>	763	620	663	636	6 4 5	340	3100		>	0	257		c =	CUM	FOURIER	>	9	220	0	- 4	7
				1001	504	1 4 5 4	214-				n	1091	-532	-515	1479	-487				>	0	539	2	20			>	0	180	157	148	137
HREC2	-	,	Ξ,	317.1	322.9	325.7	331,3			-	ı	117.1	321.0	322.2	325.2	326.0			•	11	0.	24.2	0.	. 0		-	ī		17.4	7	12.3	11.4
VAD			SPEED	1005	166	1 + 6	417				SPEED	1000	1000	0 40	647	963				SPEED	0	•	0	67		-	SPEED	()	•	30	4.3	0,
	PEAKS		2	011	103	6.5	131			PEAKS	3		701	000	1112	101			LAK	\$	0	33		2.2		PEAKS	1	-	, ,	20	5.4	52
180.			>	737	162	118	803				>	111	76.4	159	114	783				>	0	557)	9 0			,	U	7	9+1	1.20	112
)	- 683	-572	-528	-437				=		2001	100	200	-525				n	0	327	0	22			0		2 5	500	175	162
HE 1 GH			Z	-	2	•	.				-			7 .	7 3	. 5				z r	-	2	3	3 W			7		- ^	3 6	7	5

C-5

	9:45:1			SP	52	0 7	102	*	T			:	40	25	*	83	16	70																			
	START TIME			Ŧ	326.0	324.8	19.9	332.9	330.1				-	26	325.2	353.9	349.7	*																			
	ST		F11	SPEED	9 1 8	100	891	0101	0 4 0		11.		SPEED	978	986	196	973	0 0 1				0		0	0	0						0	2	_	2	2	
HD270			WAVE F	3	-28	-29	-67	-50	-20		WAVE FIT		3	- 2	-2	- 38	1	?			I	••	15.	•	•	•								58.1			
			SINE	>	8 -	108	156	899	106		SINE	:				642				F11	SPEED		7						113		SPEED						
VILE A				5	-545	-555	877	-459	-517							- 104				WAVE	3	0	33	0	0	0			2		1	0	23	27	5 4	23	
HUNTSVILE			-	30	28	13	4	4	56		-		30	8.8	1.7	52	2.1	7.1	SHO	SINE	>	0	196	0	0	0		SNC	1	210	>	0	139	343	319	298	
176		SN		20	25	15	69	•	31	S			20	25	8	31	56	27	DEVIATION	_	>	0	195	0	0	0		EVIATIO		-	>		13	724	63	5.8	
12/07/1		TE HEA	IENTS	H	323.6	326.9	71.6	335.5	331.3	E MEAN	IENTS		I	323.6	325.8	352.3	348.9	346.0	STANDARD D	S	H	0.	20.6	0.	0.	?		DARD DE		0	ĭ	0.	14.7	54.2	47.6	43.2	i.
V A 0		ONE MINUTE MEANS	COEFFICIENTS	SPEED	747	016	583	956	196	CUMWLATIVE MEANS	COEFFICIENT		SPEED	747	855	789	872	8 1 8		FICTENTS	SPEED	0	26	0	C	0		CUMULATIVE STANDARD DEVIATIONS		derricien.	SPEED	0	102	127	7 7 7	36	2
		ō	OUNIER		•	5.9	1	33	0	20	OURIER		2	0	0 9	3	50	22	E MINUTE	R COEF	1	0	72	0	0	0		ULATIV	,)	3	0	ď	1 10	2	4 7	e.
			104	>	109	733	185	870	869		0 4		>	109	689	563	624	637	ONE	FOURTE	>	0	131	0	0	0		FOU		FOURTER	>	0	120	270	271	244	
				>	-442	-488	559	-395	-382				>	-442	-473	-215	-251	-272			>	0	300	0	0	0					3	0	214		470	,	;
HRECZ			-	ı	316.9	127.1	328.9	327.3	335.3			•	I	916.9	121.7	325.0	125.4	327.1		-	Ŧ	0.	5.8	0.	0.	0.				-	ī	0.	7 . 1		4		
OAV				CHERD			3.4	987	566				SPEED	0	1 1 1	6 9 3	9 4 6	973			PEED		23	0	0	0					PEED			27	40	34	
			PEAKS	,	47	ď	0	122	9		2 4 4 4	¥	*	47	13		0	0 0		PEAKS	3	0	3.8		0	0				PEAKS		0	3.5	7	*		
	,u.			>	680	201	× 23	77	404				>	084	275	787	195	n #			,	0	7.3	0	0	0					,	0	2.5		2.5	q	
	2			-	-4.15	-6.30	1 000		4 - 1 - 2				0	-	1	7 5	1 1	-523			0	0	7.0	0	0	0					5	0		3.5		n (2)	
	HE 1 GH			2	-			7	. 2				Z			4 "		ns 0-6			Z		2	•	3	5					Z X	-		4 6	3		

- -

	9145119																																
				8	36	* 9	52	87	4			8	36	5.5	3	6.5	62																
	START TIME END TIME			Ī	327.9	326.6	305.3	322.8	335.9			ī	327.9	327.0	321.6	322.0	324.0																
	EN ST		-	SPEED	943	986	879	4 4 4	441		<u>-</u>	SPEED	6 4 9	973	0 7 0	047	955																
HD270			WAVE FIT		•	-28	6-	17	- 38		WAVE FIT	3		- 35	-21	-	-			ī		12.7	•	19.4	•			ī	•	9.0	13.1	13.4	
. 4 .			SINE	>	199	918	808	739	016		SINE	>	199	1 8	735	736	191			SPEED	0	34	0	9 6	0		-11	SPEED	0	35	55	28	
ILE ALA				>	-500	-533	-716	-545	101-			5	-500	-522	-571	195-	-539		WAVE	3		35	0	20	0		WAVE	3	0	28	36	0 7	
HUNTSVILE			-	30	92	8 -	28	27	54		-	30	26	2.1	23	54	5.4	S	SINE	>	0	1 4 8	0	258	0	s	SINE	>	0	105	174	177	
16		s		20	27	7.7	31	71	6 1			20	27	23	52	54	23	DEVIATIONS		>		163	0	107	0	1A110N		>	0	117	136	139	
12/07/7		ONE MINUTE MEANS	IENTS	H	330.2	326.6	302.2	322.2	341.1	CUMBLATIVE MEANS	IENTS	ĭ	330.2	327.8	321.4	321.7	324.4	DARD DE	1 8	ĭ	•	20.2	•	18.3	0.	CUMULATIVE STANDARD DEVIATIONS	2	ī	0.	* * * -	17.4	15.8	
VAU		N I I	COEFFICIENTS		440				616	THLATIV	COEFFICIENTS	SPEFD		827	778	786	161	HINUTE STANDARD	COEFFICIENTS	SPEED		91	0	36	0	STAND	COEFFICIENTS	SPEED	0	89	112	6 8	
		ō	œ		108	0.4	-8-	20	85	0.0	DUNIER			63	2.7	52	*		COEF	3		96	0	101	0	LATIV		*	0	7.8	36	00	
			FOURIE	>	159	669	337	613	115		100	>	159	683	296	209	627	ONE	OURIER	>	c	153		121	0	CURU	OURIER	>	0	112	195	162	
				>	-371	-463	-534	-483	-264			5	-171	-432	1458	1466	-437			2		260	0	727	0			>	0	161	791	162	
HREC2			~	ī	326.4	334.1	317.9	320.0	342.2		-	1	326.4	111.5	328.1	325.4	327.8		-	1	0		0.	50.4	0.		-	ī	0.	0.6	0.01	12.7	
VAD				SPEED	916							SPEED			156					FED	,	-	0	23	0			0.33	0	9	25	0	
			PEAKS		127	7.8	-1	9	115		PEAKS			. 0	69	5.1	0.9		PEAKS	45	0	5	0	06	0		PEAKS	a s	0	53	26	6.5	** **
	.0.			>	763	8 # 8	900	669	+		-	>	143		801	101	788			>		83	Э	153	0			>	0	43	1 8	155	
	1 = 360.			0	-506	-430	0	w	-293			0	-504	1 4 5 5	765-	815-	484			n	0	173	0	216	0			0	0	130	128	145	
	HE16H1			Z	-	7	~	7	S			2			~	,				2	-	2	6	7	S.			2	-	2	3	3	u

61:05:				1.7	11	*		25					•			12	\$ \$														
START TIME 9								331.3				4	•				333.1														
	F17							196			_	SPEED	200		962 3																
	WAVE F			- 34	-36	-42	-37	-33			WAVE FIT				- 38	-38	-36			I.	7.4	•	5.3	10.2			ī		0 . 4	5.5	
	SINE							836			SINE	>	833	20.00	854	862	855		FIT	SPEEU	38	0	53	23		111	SPEED	8	7	5.6	
	_)	-389	-531	-432	-378	1 4 5 8				2	. 289	1 4 6	-435	-425	-433		WAVE	3	15	C	30	22		MAVE	3	-		17	
			30	16	0	1.2	•	22			_	30	4		13	=	7	940	SINE	>	18	0	87	0 62	S Z	SINE	>	4	36	5.2	
54.1			9.0	50	7 -	13	٣	54	S			20	20		9	-	1 6	EVIATI	_	>	127	٥	55	161	V1 A 1 10	_	0	121	121	0.5	
ONE MINUTE MEANS	CIENTS		1	339.5	323.0	379.3	336.1	331.3	CUMBLATIVE MEANS		SINITS	Ξ	339.5	334.0	332.1	332.8	332.4	MINUTE STANDARD DEVIATIONS	s.	11	7.5	0.	3.8		STALDARD DEVIATIONS	S	11	7.5	10.01	8.3	
7 H	COEFFICIENTS		SPEED	908	916	845	958	7.80	HULATI		COEFFICIFNTS	SPEED	908	843	855	872	849	TE STAN	DEFFICIENTS	SPEED	39	0	25	2 ¢		COEFFICIENTS	SPEED	3.6	102	11	
0	H I E H		•	43	-	19	37	-	0.0		FOUNTER		43	58	6 7	47	2.8		J			0	63	° =	CUMULATIVE				09	09	
	3		>	153	119	723	876	699			201	>	753	762	146	768	743	ONE	FOURTER	>	7.4	U	9	- 1	CUMU	OURIEH	>	74	15	2	
			0	8/7-	-587	-459	-386	-380				n	-278	186-	004-	- 34B	-386			>	9.5	3	15	202			>	9.5	198	- + -	
	-		E .	335.4	329.4	334.8	338.4	331.1			-	ī	32.	3.	332.7	33.	33.		-	111	4.7	0.	6.1	0.0		-	H	4.7	7.0	9.9	
			2756	101	0101	556	246	5				SPEED	505	434	5+6	156	15.			SPEED	**	0	75	٥ ٠				4.3	10	2.0	
	PEARS	3		2	7	1.4	101	œ		3	0 14 1		63	6.5	14	7.3	11		FEARS	35	20	0 ;	5.7	7		PEAKS	3 SPE	7.0	-	17	
		***		, , ,	201	9 2	613	0 T				>	761	919	979	D .	7			,	32	3 .	701	9.5			•	3.5	2.0	20	
		-	0 . 0 -	0	5	10,	-360	1455				>	. 4.	055-	-430		97,-			5	154	0 6	0 :	127			Э	154	124	103	
и 16н1				-	•	7 :	7	2				2	-	,			- 8			N 1 N	-	7 -	, ,	r is			2	-	2	٠:	**

9:50:21				8.2			09	73	96							82	14	70	7.1	7.5																			
START TIME END TIME			H.	323.2	9 2 2 6	1.676	317.3	333.7	312.4						<u> </u>	323.2	323.7	322.1	326.0	324.0																			
	=		SPEED	111	100	00/	933	720	628				-1		STEED	111	784	821	787	165																			
H0270	WAVE FIT		3	7	0		- 64	-43	-21				WAVE FIT	1		7	0.4	- 46	- 45	7				Ŧ	•	1.5	•	15.3	•				I			3.1	9.5	10.01	
A L A .	SINE		>	622	111	100	989	623	423				SINE	;	•	622	632	948	638	109		113		SPEED	0	12	0	170	0			114	SPEEU	0	, -	75	109	116	
			0	594-		000	-632	-333	-463					:	0	-465	-463	-505	1448	45		4446		3	0	8.2	0	9	0			NAVE A	3	0	0	34	27	11	
HUNTSVILE	-		30	10	a	D	9	5 4	=				-	-	20	0	۰	=	15	-	SN	SINC	1	>	0	22	0	7 9	0		2	SINE	>	0	, a	3.5	30	ď	
3 7 8			0.7	7	7.		71	53	13						7.0	J	=	13	1.0	1.7	DEVIATIONS			כ	0	10	0	542	0		IATION		0	0		80	156	145	
VAD 12/07/7	TENTS	•	I -	321.2	127.1		310.7	329.8	311.8		ONE MEANO		LEHTS	1		321.2	325.1	351.5	324.3	372.5	STANDARD DE	5	,	I.	0.	4.2	0.	10.7	0.		CUMULATIVE STALBARD DEVIATIONS	5	ı	0.	3		0.6	9.5	
VAD NE MING	CUEFFICIENTS	- 1	SPEED	700	131		192	539	206		MAN AT . VE MEAN		COEFFICIENTS	2	37550	100	721	738	672	648		COFFERENT		SPEED	0	9 7	0	50	0		E STALD	OFFFICIENTS	SPEED	0	1.1	47	110	11.9	
	OURIER		*	10	5.2		26	74	c 0		٦	5	BOURIER	3		0.	3.8	25	43	38	E MINUTE			3	0	20	0	27	0		ULATIV	H C06.	×	0	3.8	35	3.3	33	
	0.4		>	244	* 1 7		514	191	337				F 0	>		246	165	572	535	207	ONE	FOURTER		>	0	6.9	0	33	0		E O O	FOURTE	>	0	43	63	11	101	
			,	-437	100		200	-269	-311					2	> !	-437	80+1	954-	-364	-341				>	0	20	0	16	0				>	0	50	80	130	6 -	
HREC2	-	٠	1	304.6	328 A	0.030	322.9	341.0	336.7				-	7		304.6	320.6	321.2	327.8	329.1		-	•	H	0.	9.	0.	3.2	0.			-	Ŧ	0.	14.3	11.7	13.8	13.0	
VAD		- 1	SPEED	174	000		100	735	685					00100		114	161	832	800	7 8 /				SPEED	0	1	0	991	0				SPEED	0	7.1	12	104	106	
	PEAKS		*	-38	179		111	99	0				PEAKS			~	100	2	104	0		PEAKS		2	0	- 1	0 ;	3.3				FEAKS		0	121	103	16	0	
· · ·			>	664	0		0 1	643	030					3		434	909	+ 0	650	.50				>	0	7	2	7	0				>	0	147	140	129	90	
			0	-636	0 - 7 -		000	747-	-270					11	,	-636	764-	-510	174-	666-				D	0	5.4	0 0	7,	0				ס	0	131	113	169	7 9	
AE 16H				-	2		٠:	+	5					2		-	2	7		9				Z I E	-	7	σ:	,	n				NI N	-	,	3	,	'n	

France F	FIGURER CORFFICIENTS 1 SINE MANE S	HE	1641 .	.5+		•	D HARE	,			VAD	12/01/1	176	HUNT	HUNTSVILE	ALA.	HU270	.0		
	1																	S	TART TIME	
Fig. 10											ONE MI	VUTE MEA	SN					ū	40 TIME	9:55:21
1					¥		7		0 4	RELEG	COEFFI	CIENTS		-		SINE		F17		
	FEANS 125 135 277.2 264 352 244 644 302.0 54 78 649 779	-			3	S		0		*	PE	I	20	5						
The color of the	FEANS FEANS	4 7			2.5			795-		94-	9	302.0	7 1	2 0	2010		3	SPEED	I	SP
The color of the	THE STATE OF THE S	4 .	'		135			-501		97	a	125.4		9	100		- 16	1040	318.5	0.8
FEATS 700 112 700 219 6 - 319 574 5 6 - 67 377 6 7 7 7 7 7 7 7 7	SEAR	7			151			-546		a) ~	311.			10	041	- 74	933	328.1	54
CUMULATIVE REAKS FEANS FEANS	The control of the	7 0	•		132			-355		S	1 0	327.8	- 2	<u>.</u>	-593	692	9+-	913	319.4	7.2
FEANS FEANS FOUNTER COFFICIENTS SINE MAVE FIT	FEANS FEANS FEANS FOUNDLATIVE MEANS FOUNDLATIVE MEANS FOUNDLATIVE MEANS FOUNDLATIVE MEANS FEANS FINE MAVE FIT FOUNDLATIVE STAPPARM FOUNDLATIVE STAPPAR	n			170			-337		107	-	329.7	26	2 6	1482	712	-33	900	322.6	77
1	FEANS FEANS FEANS FOUNDER CORFICIENTS SINE MANE SINE M																			
1	FEANS 1									10	MULATI	VE MEAN	5							
1	1				E A ×		-		FOL	H 1E.R	COEFFI	CIENTS		-			1	:		
1 - 630	1 - 630	MIN	-	3		C	•										1 1 N E	_		
1	The control of the	***	a a			1		0	>	3	a	I	20	30)	>	3	•	2	
1	FEAST 127 922 318.9 -522 603 42 812 317.6 23 12 -554 786 75 518 605 417 912 318.9 -552 605 517 912 316.9 -552 605 517 912 318.9 -552 617 912 318.9 -552 721 575 37 743 371.4 22 14 -556 721 912 318.9 -472 575 37 743 371.4 22 14 -556 721 912 913 318.8 -472 575 37 743 371.4 22 14 -556 721 912 913 318.8 -472 575 37 743 371.4 22 14 -556 721 912 913 91 91 91 91 91 91 91 91 91 91 91 91 91		×	4 0	77	435	297	-562	352	9+-	499	302.0	5.4	2.8	- 497	170				46
FEATS FE	FEANS FE	· m	- ac	V P	-	120	315	125-	603	45	818	317.6	23	- 2	100	101	9 1	0+01	318.5	08
FEANS FE	FEATS 1. FOURIER COEFFICIENTS 2. FOURIER COEFFICIENTS 2. FOURIER COEFFICIENTS 2. FOURIER COEFFICIENTS 3. FOURIER COEFFICIENTS 4. FOURIER COEFFICIENTS 5. FOURIER COE	*	5	. 4		171	5 . 6	-527	575	53	793	316.2	54	13	100	763		896	324.9	63
PEANS 1. FOURTIER COEFFICIENTS 1. TOURIER COEFFICIENTS 2 212 231 39 64 19-5 41 41 40 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PEANS 1. FOURTER COEFFICIENTS 1. FOURTER COEFFICIENTS 2 212 231 39 64 19.5 41 43 40 12 3.7 82 111 17 51 5 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5	5.	m	- 0	200	222	0/1	575	37	155	320.1	22	7	-536	721			323.5	92
FEATS 1. FOURTER COFFICIENTS SINE MAVE FIT SINE MAVE F	1				4		25.3	151	575	4.1	743	321.4	77	•	-528	720	-56	897	323.6	70
FEAKS 1. FOURTER COFFICIENTS 1 SINE MAVE FIT 1 0 0 0 0 0 0 0 0 0	1								ONE	NING			VIATIO	52						
114 U V	10 V X SPEED																			
1	2 212 231 39 64 19.5 41 43 40 12 3.7 82 111 17 51 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6				4				OURIE	0	TULLENT	5		SINE		111				
2 212 231 39 64 19.5 41 43 40 12 3.7 82 111 17 51 61 61 62 60 60 60 60 60 60 60 60 60 60 60 60 60	2 212 231 39 64 19.5 41 43 40 12 3.7 82 111 17 51 69 159 69 159 69 17.5 41 43 40 12 3.7 82 111 17 51 69 69 69 69 69 69 69 69 69 69 69 69 69	droid.	D	>	27	PEE	H	>	>		L	11	-							
2 212 231 39 64 19.5 41 43 40 12 3.7 82 111 17 51 51 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 212 231 39 64 19.5 41 43 40 12 3.7 82 111 17 51 6	-	0	0	0	0	0.	0	0				,	>		<u></u>	H			
150	150	7	217	231	3.6	6.4	19.5	7	7	40			0 0	0	0	0	0.			
FEAKS 10	FEAKS 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 3			7	0	0.	0	C	0			70	- :	1.7	21	7.9			
CUMULATIVE STAFDARD DEVIATIONS FEAKS I. FOURIER COFFICIENTS I. SINE WAVE FIT I. FOURIER COFFICIENTS I. SINE WAVE FIT I. O V N SPEED II. O V N SPEED II. O V N SPEED III. O V N N N N N N N N N N N N N N N N N N	CUMULATIVE STAYDARD DEVIATIONS FEAKS IN U V W SPEED TH U V W SPEED 2 234 236 71 47 20.7 40 219 32 138 138 130 79 12 71 3 208 216 65 41 18.5 39 184 71 11.6 108 80 17 65 24 105 5 248 160 51 87 18.7 101 141 66 105 11:1 88 96 22 98	u		19		5	2.1	4 4		19	17	3	0 5	0 :	0		0.			
CUMULATIVE STAFDARD DEVIATIONS FEAKS I. FOURIER COEFFICIENTS I. SINE WAVE FIT 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CUMULATIVE STA!DAPD DEVIATIONS IN U V M SPEED TH U V M SPEED TH U V M SPEED 2 236 436 71 47 20.7 40 219 82 128 13.8 130 79 12 71 3 208 416 65 41 18.5 39 184 71 11.6 108 80 17 65 15 170 51 177 14.5 97 15.4 66 109 11.1 88 99 105 24 105 5 248 160 51 87 18.7 101 141 66 105 11.1 88 96 22 98	1		0		٥	0.	O	0	0	0	0.	0	5	70	0	00 0			
FEAKS 1. FOURIER CREFFICIENTS 1. SINE WAVE FIT 2.236 236 71 47 20.7 40 219 32 128 13.0 130 79 12 71 3.206 216 55 41 18.5 39 184 71 111 11.6 108 80 17 65 5.246 160 51 87 14.5 97 151 66 109 11.4 94 105 24 105 5.246 160 51 87 18.7 101 141 66 105 11.1 88 96 22 98	FEAKS IN U V M SPEED TH U V W SPEED TH U V W SPEED 2 238 236 71 47 20.7 40 219 32 129 13.8 130 79 12 71 3 208 216 65 41 18.5 39 18.4 71 111 11.6 108 80 17 65 5 248 160 51 87 18.7 101 141 65 105 11.1 88 96 22 98																			
FEATS I. FOURIER COEFFICIENTS I SINE WAVE FIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FEAKS FOURTER COEFFICIENTS SINE WAVE FIT								CURUL	47176		5								
1N 0 v w SPEED TH 0 v w SPEED TH 0 v w SPEED 1 0 0 0 0 0 0 0 0 0 2 236 216 47 207 49 217 49 10 0 0 0 0 0 3 208 216 55 41 18.5 39 184 71 111 11.6 108 80 17 65 4 170 51 77 14.5 97 154 66 109 11.1 94 105 5 248 160 51 87 22 98	IN U V M SPEED TH U V W W W SPEED TH U V W SP											2	NOTIA							
1	1				4		:		OURIEH	COEFF	ICIENT	5								
236 236 71 47 20,7 46 219 32 128 13.4 130 79 12 71 17 47 20,7 46 219 32 128 13.4 130 79 12 71 176 170 51 77 14.5 39 184 71 111 11.6 108 80 17 65 24 105 25 105 24 1	238 236 71 47 20,7 46 219 82 128 13.8 130 79 12 71 176 176 177 18.5 39 184 71 111 11.6 108 80 17 65 24 105 248 160 51 87 18.7 101 141 64 105 11.1 88 96 22 98	-		×	-7	142	7.11	>	>	5	1	ī	77	>						
236 246 71 47 20,7 46 219 82 128 13.8 130 79 12 71 176 170 51 77 14.5 97 154 71 111 11.6 108 80 17 65 248 160 51 87 18.7 101 141 64 105 11.1 88 94 22 98	236 246 571 47 20,7 46 219 82 128 13.8 130 79 12 71 176 170 171 11.6 130 79 12 71 176 170 171 51 176 170 51 177 14.5 97 15.4 66 109 11.4 94 105 24 105 248 160 51 87 18.7 101 141 64 105 11.1 88 96 22 98		0	9		0	0.	2	-				,				I			
248 160 51 87 18.7 101 141 66 105 11.1 88 96 22 98	74 5 7 14.5 39 164 71 111 114 130 79 12 71 17 17 17 17 17 17 17 17 17 17 17 17	7 .	7.38	736	7.1	1+	20.7		219	2.0		•	-	0	0	0	0.			
248 160 51 87 18.7 101 141 66 109 11.1 88 96 22 98	248 160 51 87 18.7 101 141 66 105 11.1 88 96 22 98	7 3	907	417	69	-	18.5	3.6	183		071	5.7	7	10	1.5	7.1	1.9			
24 160 51 87 18.7 101 141 64 105 11.1 88 94 22 98	24 160 51 87 18.7 101 141 66 105 11.1 88 96 22 98		0 / 0	071	5	11	5.41	10	15+	. 4	100	0 =	2 3	0.5	11	6.5	7.0			
86 22 96 88 1111	98 35 48 AB	n	0.7	091	2.	47	18.7	101	7	4	50			5 .	5 4	105	2.9			
													r	90	25	9	5 . 4			

503	12:59																													
	6:5		9	, :		0	0.5	62			ů	,	7	0 4	2 0	57														
START TIME	END TIME		Ŧ	300.7	320	0.026	333.6	318.3			ī		304.7	324.7	327.3	325.8														
	Z.		-			100	840	8 6 6		-	SPEED		0 0	910	106	106														
		WAVE FIT	3		1 1			-33		WAVE FIT	3		57-	6	- 34	-34					3.3	•	•••			ī		8.01	10.4	
		SINE	>	537	789	200	60.0	670		SINE	>		705	737	751	737		F.1.T	0		3	0	00		111	PEED	0	19	53	
			n	-645	- 07	-424	- 330	965-)	207-	101	-513	-476	961-		WAVE	3				00		WAVE	3		26		
		-	30	27	2.5	20	26	5.6		-	30			23	_		5,	SINE	>		99	0	00		SINE	>	0	153	7	
	s		20	33	7.	25	25	27			20	,,	0 0	28	27	27	DEVIATIONS		=	0	23	0	00	PATIONS		>	0	06	70	
	UNE MINUTE MEANS	1ENTS	ĭ	304.3	324.1	337.6	329.5	314.6	CUMULATIVE MEANS	IENTS	ī	104.1	317.5	322.5	323.9	322.4	STANDARD DEV	S 1	ī	0.	4.3	0.	20	STALDARD DEVIATIONS	2	1	0.	9.11	13.9	
	H HILL	CUEFFICIENT	a.					929	V T A 1 2	FOURTER COEFFICIENTS	PEED	4		712				DEFF ICIENTS	3		1.2	0	00	STALD	COEFFICIENTS	EED	0	69	65	
	ó	FUUNIER C	3	24-	110	11	4	-57	5	J H31	S		6	7 9	4 4	J	MINUTE	COEFF	3		1.7	0	00	CUMULATIVE	COEFF	3	0	06	74	
		100	>	344	294	705	603	G 7		FOUR	>	348	512	260	695	247	ONE	OURIER	>	0	7 4	0	0.0	CUMUL	OURIER	>	0	9 1	153	
)	-503	-429	-289	-354	1 1 1			>	-509	454-	1 1 1	205-	X			5	0	37	0	35		F 0	5	0	53	7	
		-		304.1						-	ĭ			323.4					ī	0	7.0	0	00		-	Ŧ.	0.	0.		
			SPEED	838	069	808	830	404			SPEED			981					EEU	0	34	0	20			EED	0	3.5	0	
		PEAKS	3	2.6	159	161	50	6		PEAKS		99	125	134	127			PEAKS	N SPE	0	1.2	0	30		EAKS	₹ 5PE	0	0.9	25	
• 00 •			>	470	169	7 0 0	770	069			>	470	617	684	107				>	0	50	0	00		2	>	0	5 a	0	
			Э	569-	555-	-193	-308	5.88			5	1669-	109-	0 0 7	9 9 9 9	701			0	0	6.3	0	2.5)	0	2:1	117	
не 16н1			n I n	-	7	3	#	S			N 1 N	-	7	σ:		-11			2 1 1	-	7 .	2	• 50			2 1	_	7 "	, :	

9:50:21		SP	0 7	62	59	47	0.0			ď	. 7	5.3	55	7.1	7.3															
START TIME END TIME 9		TH		323.8	327.9	34.1	320.7			1		327.0	327.3	338.5	334.0															
	F11	SPEED			1 947				F17	SPEED			9 954						5.9	0	•	0.				5.9	0	0	5	2
HD270	SINE WAVE FIT	3	- 3	- 8	-21	- 7	•		WAVE	3		. 5	-38	7	-			Ĩ	S		3				H	5	5	3.	51.5	52.
	SINE	>	827	759	802	732	643		SINE	>	827	804	803	161	754		11	SPEED	98	0	•	O 86		F1.1	SPEEU	9 8	63	45	20	7.3
HUNTSVILE ALA		>	664-	-554	-503	495	-512			ח	664-	-517	-511	-343	-385		WAVE	3	11	0	13	2 0		WAVE	3	=	28	26	27	3
NUN I	-	30	15	58	22	54	21		-	30	5	61	50	2.1	21	SNC	SINE	>	125	0	52	201	s.	SINE	>	125	16	69	69	117
45 45		20	15	36	21	0	17	.0		20	15	22	22	20	1.0	VIATI	_	5	0,	0	15	0 601	DEVIATIONS		0	0,	43	0,	413	360
VAD 12/07/7	CIENTS	H	329.2	324.2	329.0	31.0	317.9	CUMULATIVE MEANS	CIENTS	H	329.2	327.6	328.1	338.6	333.4	MINUTE STANDARD DEVIATIONS		H	8.3	0.	3.5	12.3			1	8.3	6.5	2.0	76.0	7.4.
VAD	FUUNIER CUEFFICIENTS	SPEED	838	169	144	867	703	MULATI	CUEFFICIENTS	SPEFU	838	790	171	787	766	TE 5TA	COEFFICIENTS	SPEED	82	0	12	0 •	E STALIDARD	COEFFICIENTS	SPEED	79	7.0	9.0	-	<u>a</u>
0	RIER	3	7.3	13	7	47	31	3	FOURIER	*	7.3	53	30	36	35			3	34	0		09	CUMULATIVE		t	34	4.2	1.5	99	9
	101	>	714	563	638	744	513		F01	>	714	663	653	699	654	ONE	FOURTER	>	T	0	9.2	= 10 0	CUMU	FOURTER	>	P	8 7	14	11	101
		5	624-	101-	-380	1 10	2 2 2 1			כ	-429	-421	1011	-263	-314			>	136	0	-	145			5	136	10	7.5	÷ 5 °	318
HREC2	-	Ŧ	329.8	329.0	336.2	339.2	326.5		-	ĭ	329.8	329.5	332.2	333.4	331.6		-	H	18.0	0.	1.5	2. 2.		-	Ŧ	18.0	12.7	4.1	9.5	æ.
O .		SPEED	467	6/4	436	4 4 2	862			SPEEU	196	938	937	376	106			SPEED	ar or	0	43	o ;			SPEED	5.0	99	151		1.1
	PEAKS	z	132	86	121	25	5		PEAKS	3	132	1117	113	101	0		PEAKS		0+	0	16	37		PEAKS	8	0+	3.6	53	H C	5
• 0 •		>	N 2 U	154	958	790	720			>	820	198	821	9 9	192			>	007	0	53	130			>	007	1+1	109	60	101
		0	194-	754-	-376	-300	124-			7	194-	794-	-428	904-	775-			ח	232	0	0,	>			>	232	164	121	175	011
16 I GH I		z T	-	2	•	,	v			z E	-	2	٦		-12			212	-	3	6	t w			z E	-	7	e :		r

9:50:21				55	7 :	9 1	62			G		5.1	0 7	6 4 2 2 2	;																	
START TIME END TIME				304.3	3.505	133.4	324.1			1		318.9	324.7	324.2																		
	111	0	1				8 4 2		F11	SPFFD	700	955	0 4 0	936						5	0	0 =	0						2	œ.	- a	
HD270.	WAVE	3					-35		WAVE FIT	3	. 7.	-5	- 46	143					-	7.5			10.0					_	7.		2 -	10.7
ALA.	SINE	>	B 20	40.7	9 -	710	682		SINE	>	820	711	152	747			111	-	SPEED	2) d	0	06			111	0 1 1 0 0	4 0	> 0	7 3	. .	79
HUNTSVILE		3	- 5.5.3	-724	6 1 1 2	-546	-482			5	-553	019-	-531	-537			MA VE	2		<u>-</u>	- 2	. 0	1.7			E V E			- :	75	2 4 5	5 4
HUNTS	-	30	23	3 .	-		56		-	30	~	56	50	-6-		SNO	SINE	>	, '	n c	•	0	158		s.	SINE	>	. '	٦ .	 	130	1 2 9
3 45		20	28	34	23	•	32			20	28	30	27	54		DEVIATIONS		=		0 0	135	0	67		1 A T 1 ON		2		0 0	. 4	0 5	131
VAD 1270777	CIENTS	H	325.9	297.8	327.3	320.4	321.3	CUMBLATIVE MEANS	CIENTS	ĭ	325.9	316.5	320.9	320.8			1 5.	7		n =		0.	18.1		CUMULATIVE STANDARD DEVIATIONS	2	1		0 0	7.4	7.4.	14.0
VAD	FOURIER COEFFICIENTS	S		652				HULATI	COEFFICIENTS	SPEED	775	734	139	764		MINUTE STANDARD	COEFFICIENT	0 3 3 6 5	2 2 2	37	1 45	0	6 8		E STALD	COEFFICIENTS	SPERU		7,7	2 0	101	911
	URIFR	*	5.2	-35	-28	33	-35	3	FOURIER	3	25	23	~	~ ~						0	64	O			LATIV		3		10	19	-	2.6
	FO	>	630	304	629	685	472		FOL	>	630	522	7 9 1	555		ONE	FOURIER	>			504	0	161		OHOU	FOURIER	>	0	0	x	171	170
		0	624-	-516	-384	-545	-358			>	-453	1478	7	140				2	174	0	5.5	2	100				>	174	5	120	119	117
HRECZ	-	ī	327.1	312.4	345.8	313.9	320.4		-	ĭ	327.1	322.2	331.6	326.6			-	Ξ	7.4	0.	16.6	0.	0.1				1 H	2.4	£	16.5	16.5	· ·
V A V		SPEEU	1007	258	006	656	874			SPEED	1007	* 0		101				SPEEU		0	4.5	0	=				SPEEU	30	171	26	1 0	11
	PEARS	.2	175	57	5	9.5	130		PEAKS	¢	175	133	- 0	100			PEAKS	\$	1	0	0+	0	35			PEARS	s s	1	7.3	7.1	6.3	2.5
. 0.0		>	5 5 5	295	883	234	015			>	7 7 9	791		137				>	5.6	0	7.1	0.	-				>	9.5	168	132	145	971
nE1641 . 180.		Э	1+5-	-613	-221	519-	155-			ס	1+5-	2007	7 4 7 -	2 2 2				n	8	כ	242	۵.					D	94	7.5	237	225	195
7 E 1 6		z z	-	2	3	3	\$			z u	-	~ -		- 10	3			211	-	2	•	7 .	n				n I n	-	2	٣	J ,	2

				VAD	HPECZ				VAD	12/01/16		HUNISKILE	LE ALA.		HD270.	2148		9:50:21	
1E 1 5H	7 *	10.														END	END TIME	9:55:21	
									WINU	ONE MINUTE MEA'S									
		2	£ 4 4 5		-		FOURTER		COEFFICIENTS	IENTS		-		SINE W	WAVE FIT				
									0	11	20		2	>	5	EED	± -	SP	
11 12	0			SPEED	Ξ.					108.1	14	23	-480	702		•	115.7	57	
-	15.36	186		7 11 7	23.	7 + 4 -				7 266	, ,		414	450			121.5	52	
N	504-	7+1	27	n 1 2	-	5/5-				334.2			-383	833	91-	916	335.3	63	
7	• 316	5 S E	35	434	•	900				333.9	0		165-	698			130.5	36	
r in	1530	434	3.5 -	494	323.7	125-	100	33	98 -	373.6	•		-500	178			127.2	52	
								į	7.1.	PHA PM BUTTA IMMILES									
									GLAII										
		ů.	EA.S		-		FOUR	RIER	COEFFICIENTS	15475		-		SINE	WAVE FIT				
- 1						=	>		0 3 3 4	ī	20		0	>	W SP	2 2	H	SP	
11	>			4						10.4.7	4.	23	-680	702	-25		315.7	5.7	
-	T	186	- '	# 1 m	323.1	5 5 5 5	5 7 5 7			313.0	3.6	•	-626	685	6 -	936	317.6	55	
7	52	171	11	9 6	325.8	0 1	0 - 4			322.3	30	. ~	-528	744	-18		324.7	5.8	
	7	*O8	7 4		337		200			327.4	5.8	~	-522	765	-22		325.7	55	
7 .	7	174	0 0	n 1	332.0	1 4 5 5	704	7	749	322.7	5.7	8	-517	168	-20		326.1	54	
r I	7	<u>n</u>	5	001	226	,													
							ONE	MINUTE		STANDARD DE	DEVIATIONS	SZ							
			PEAKS		-		OURIER	COEFF	COEFFICIENTS	1 5.		SINE	NAVE .	F17					
					-	-	>	3	0 3 3 4	111)	>		SPEED	ĭ				
2				1	- 4	0	. 2		2 -	6.7	132	160	32	23	12.0				
- 1	0 0	0	η.	2 0		. 0	. =	0	0	0.	0	0	0	0	0.				
7 "	0 511	a	0	7	0	~	142	0	130		7	23	15	34	1.0				
) 2		0	6	-	0	0	D	0	0	0.	0	0	0	D	0.				
5	-6	57	33	1.7	1.2	-	7	30	35	1.7	21	28	28	35	-				
							CUMU	4117	STALL	CUMULATIVE STARBARD DEVIATIONS	IATION	s,							
			PEAKS				FOUPTER	COEF	DEFF ICTENT	1.5		SINE	WAVE	111					
							2		- 3	2	3	>	3	SPEED	ī				
2 1 2	0	>		SPELL			>		21220		> !								
	9	09	132				3.2	x	2.1	6.7	132	0 9 1	32	6.3	0.71				
2		5	* 0	90	5.0	/11	2 4 5	J	5.8	2 3	133	7	7 0	9 9	1.0				
~	21	0.7	19				6 9 3	e r	101	0	2 3	911	20	8	10.7				
7	1 8	8.5	9 .				70	5 7	27.1	2.1	124	00	20	0.9	. 6				
		*	20				0.1	i											

9:50:21			SP	0.4	6.3	70		1	95			SP	0+	# #	91	40	E 7														
START TIME				329.7	9 22	0.000	330.4	333.0	331.6			_	329.7	331.1	331.0	331.4	331.4														
FND			03	446					245		-	SPEED				956															
		WAVE FIT	SPE				4.5	-70	=		WAVE FIT		91-	-18	-29	-36	-30			Ŧ	1 • 3	•	.5	3.0			ĭ	1.3	2.5		
		SINE N	>	A 3.2		10/	700	819	828		SINE	>	832	815	811	812	918		1.1	SPEEU	25	0	9	5.7		F11	SPEEU	25	9 2	7	2 4
			0	4 9 5	000	-383	1446	911-	1 7 7			כ	- 485	154-	0 7 7 -	1 7 7 1	1 4 4 5		HAVE FIT	3	•	0	- 2	0 0		NA VE	*	•	۰	1/	22
		-	30	,					25		-	30		S		1.7	0	5 4	SINE	>	33	0	17	27	\$	SINE	>	33	38	50	20
			2.0		0.7	9 -	77	25	7.7			20	20	6	77	77	73	VIATIO		כ	4.5	0	-	7.1	1A110N		J	4.5	67	Œ T	45
	ONE MINUTE MEANS	FNTS	11		33000	340.4	327.6	326.8	332.7	CUMOLATIVE MEANS	1ENTS	H	330.2	333.6	331.2	330.4	331.0	STANDARD DEVIATIONS	2 1	I	8.2	0.	6.3	7.3	CUMULATIVE STA, DARD DEVLATIONS		H	8.2	8.3	7.4	0
	OF HIND	COEFFICIENTS	- 3						724	V. F # 10.	COEFFICIENTS	SPEFU	2 2			782			COFFFICIELT	SPEED	-	0	124	o ,	E STAL	DEFFICIELT	SPEED	175	139	120	0.
	0	FUUNIER C	3		-	-24	26	124	11	ð	FOURTER	3		-	. ~	2.5	36	MINUTE				0	9	390	LA11V	0	3	0.5	3.7	47	
		FOUR	,	>	723	693	631	435	0.00		003	>	723	711	2 2 4	673	199) N &	FOURTER	>	10	Ð	0.9	□ •	CUMU	FOURTER	>	16	19	11	
				0	-428	-247	1000	415	-337			-	40.4	3 7 -	200	-386	-375			2	0	2	136	0 101			>	6	171	140	
		-							326.4		-	2			36496	335.2	333.0		-	i.	0	0.	2.8	0.0		-	Ξ	4.6	6.9	6.6	
									247			94405	3 -			, ,				0,105	-	. 0	3.2	= Ç			n tads	, ,	2.5	76	
		PEAKS			4.2	t t	-		= 19		P . 4 4 3 9				2 0	14	99		PEAKS	3	0	0	9	113	-	PEAKS		9	26	* 1	
•		a.		>	2 7 0	161	2		782					930	719		831			7	120		3	5.2			,	1.2.1	3.6	9	
. 3611.				7	-500	4571	200-	1 2 -	-585				0	. 200	* * * * * * * * * * * * * * * * * * * *	77.	-423				1.211	17	34	15.6			-	1 2	1 1	13.4	
ME 16h i									* J				2			7 3	-1							<i>3</i> 3	n		-		- ^		

9:55:21		•	89	47	4.5	25	9				89	54	57	5.5																
END TIME 9							328.8			S				333.0																
E N D	<u>-</u>						066		<u>-</u>					9 7 6																
	WAVE FIT		-21	-23	- 36	- 20	-50		WAVE FIT		-21	-22	-26	-27				ī	0.	4.9	•	•				ī	0.	4.	5.0	
	SINE	>	890	863	199	2	9		SINE	>	068	872	854	847			F 1.1	SPEED	0	103	0	37			-:-	SPEED	0	74	43	60
		>	-307	-432	9 3 7 7	0 00	-512			ס	-307	-390	-407	-424			WAVE	3	0	7		5 0			WAVE FIT	3	.0	2	1	
	-	30	16	12	3.0	27	13		-	30	9	13	15	0 0		S M O	SINE	>	0	140	0	507		SNC	SIME	>	0	100	0	0.
S		20	6	91	11	27	707	s		20	6 1	1.7	1 9	22		EVIATI	_	>	0	20	0	112		VIATIO	-	ס	0	8.0	3.0	,
ONE MILUTE MEANS	TENTS	Ξ	346.6	329.1	333.0	320.0	335.2	CUMBLATIVE MEANS	LIENTS	H	346.6	334.9	332.1	331.7		MINUTE STANDARD DEVIATIONS	15	ĭ	0.	7	0.	•		CUMULATIVE STANDARD DEVIATIONS	15	ĭ	0.	10.6	101	
WE MILL	R COEFFICIENTS	SPEED	858	848			857	HULATIV	FOURIER COEFFICIENT	SPEED	828	851	825	197		TE STAP	COEFFICIENTS	SPEED	0	34	0	n		E STALL	COEFFICIENTS	SPEED	0	52	, ,	05
ō	OURIER		-	43		2 0	96	00	HIER		-13	37	20	50				3				= 0		ULATIV		3		5.5		
	104	>	834	124		000	778		10	>	834	762	122	1697		ONE	FOURIER	>	0	7	0	• 0		CUM	FOURTER	>	0	63		5
		ר	861-	4 36	, :		-358			=	861-	-356	-377	-371				5		7.3	0	• :	0			>	0	9+1	1 2 3	//
	-	H.	3	_	, ,	-) (316.8		-	1	- 3	3	~	335.2	100		-	Ŧ	0.	8.6	0.	1.2	•		-	ī	0.	4.4		
		SPEED	967	7		7 0	1009			SPEED	967	952	056	7 C 7				SPEED		18	0	x :				SPEEU	0	65	7	
	PEAKS						137		PEARS			7.1	106	200			PEAKS	*		4 3	0	9 5	0		PEAKS		0	35	**	5
54U•		>	425	1	000	450	7.35			>	925	8.45	988	843				,	3	1.25	0	11				>	0	2.5	10	-
п		n	-282	- 22.5	35	1 3 4	9 9 9			>	-282	-310	-330	-384				0	0	104	0	9.0				>	0	11	*	-
иЕ 1 Gн Г		1111	-		,	7 :	3 5			z I z	-	. 7		* 's C =				2 2	-	2	•	* .	n			NIN	-	7		

9:55:21																																
=		8		701	128	102	51				2.0	102		101	86	9																
START TIME END TIME		ī	17.3		341.6	3000	305.7				Ŧ	17.3	2 . 2	339.5	333.8	332.0																
	11	SPEED	704	0 0	101	160	839			=	SPEED	685	069	718	724	753																
	WAVE FIT	3	•	0	8	-57	-34			WAVE FIT	3			- 15						I	82.1	•	1 • 8	0.0			Ŧ	82.1	9.19	56.3	52.2	
	SINE	>	340		999	386	701			SINE	>	344	451	425	427	404			F 1.1	SPEED	٥	0	11	069		F11	SPEED	٥	=	5.5	5.1	
		n		2	-220	-653	-460				>	113		-260	-318	-354			MAVE	3	27	0	-	0 ~		MAVE	3	27	50	0 +	17	
	-	30	3.4	0 7	17	13	0 0			-	30	26	27	2.1	1 9	1.8		52	SINE	>	240	0	09	53		SINE	>	240	157	184	144	
s		20	20			1 2	24				20	20	6	0	11	6		VIATIO		כ	787	0	24	0 7	20		>	787	583	155	513	
ONE MINUTE MEANS	1ENTS	Ξ	2 . 8 .	7.01	345.0	305.5	302.6	SHARK ROTTA LOND	E HEARS	1 ENTS	ĭ	18.2	. 9	340.7	334.3	331.3		STANDARD DEVIATIONS	1 5	ī	83.1	0.		o	PAGE TATO TO REACT AND A VITA HIMED AND TATOR OF THE PERSON OF THE PERSO	2	ī	83.1	4.79	2.95	52.6	
M H 100	COEFFICIENTS	SPEFU	473				716	2		OUNIER COEFFICIENT	SPEED			294					COEFFICIENTS	SPEED	04	0	4 8	001	5	COEFFICIENTS	PEED	0+	19	118	115	
	OURIER			,	79-	9	4 0 0	ā	3	4 I E B	3		5-	1.2	15	23		MINUTE	COEFF	3	30	0	s	0 69	20114	COEFF	*	30	35	1 5	4+	
	100	>	287		1	315	564			F00.	>	287	330	349	353	404		ONE	OURIER	>	234	0	45	0 0 1	3	OURIER	>	234	182	132	113	
		0	04		57	2000	765-				0	69	-	-234	-564	-330				>	7 7 9	0;	*	ЭM		L	>	2 4 4	470	465	7	330
	-						335.7			-	ī	309.6	312.5	313.7	311.6	317.6			-	Ŧ	5.9	0.		18.0		-	H	6.5	6.5	· ·	6.8	
		PEEU			06/	143	872				PEED	763	152	748	153	183				EED	8 1	0	137	77			EED	9	0.0	13	7.1	
	PEAKS	3		, ,	181	2	133			PEAKS	3	3.2	- 1	- +	53	7.3			PEAKS	A SP	173	0 0	,	3 0 œ		EAK S	* SPEE	173	-+-	152	115	7 11 1
•	2	>	487	, ,		236	170			2	>	485	503	514	445	t & 0			2	>	0	0	701	⊕ 1		2	>	5	37	79	1.1	4 44 2
		0	200	2 0	007	2	1990				כ	-588	-554	045-	-56∪	-510				Э	112	0 :	r D	279			ם	117	**	7	16	11.4.11
		Z			, ,	•	3 m				z E	-	2	٣		s - 1	7			z I	-	2	•	T S			<u>z</u> Σ		7	٦	7	ď

	9:55:21																															
	_		9			171	80 0	9 9					- 0	1,6	11	7.5																
	START TIME END TIME		3		0 0 0 0	0000	322.9	337.5			:	- 0	314.6	317.9	317.6	322.6																
	ST	F17	0 5 6 6 0	2 2 2	100		5 0	0 4 7		E	0		834	822	826	831																
HD270		WAVEF			2 0		1 2 4	-87		WAVE FIT	3			- 43	04-	-52			2		7.0	4.9	0.	00			ī	, ,	7	7.2	6.5	12.8
		SINE	>	633	0 0	7	200	757		SINE	>	433	5.8	600	201	4 5		-	4	2	0	13	0	an n		F11	PEED	1	3 6	30	28	4.5
HUNTSVILE ALA			5	-54B	-630	1 0		-327			0	A 2 4	-589	-546	-552	•		WAVE FIT	3	0	0	5.4	0			WAVE	3	,	,	4.5	- +	7
HUNTS		-	30	31	11 11		36	5 5		-	30	-	56	8 -	2.	`	S N	SINE	>	47	0	6.5	0 :			SINE	>	47	06	11	69	0
94,	s		20	35	00	-	32	12			20	35	7.	17	23	17	DEVIATIONS		ס	21	0	7 9	0	_			0	2.1	39	7.3	67	159
12/07/76	ONE MINUTE MEANS	CIENTS	Ŧ	312.2	305.7	319.1	319.7	337.2	CUMBLATIVE MEANS	LENTS	ī	312.2	310.0	313.6	314.6		STANDARD DE	5 1	I	0.	0.	9.6	0.4.6			1 5	ī	0.	3.8	6.3	1.9	
VAD	NE Alt	COEFFICIENTS	SPEED	582	713	727	609	759	MULATIV	COEFFICIENTS		82	56	99	657	,		DEFFICIENTS	SPEFD	25	0	23	o -			FFICIENTS	SPEED	45	α α	9.1	76	0.6
	1,	FOURIER	3	-58	0	8.7	16	.109	0.0	FOURIER	3	-58	-38	=	25		MINUTE	U	3	œ	0	s c	12	CUMULATIVE		COEFF	3		34	7.3	17	11
		0	>	391	416	540	465	658		F 0.1	>	391	365	454	0 0		ONE	OURIER	>	3.)	0	•	27	0 0 0 0		OURIEN	>	30	2.4	0.6	0.0	611
			0	-431	-578	-473	-393	-301			5	-431	1480	-477	1493	;		•	2	33	0	90 3	337				>	33	30	65	D 0	
HREC2		-	H	323.0	344.4	327.1	343.3	335.2		-	Ŧ	323.0	330.1	328.9	332.3			-:	H	18.9	0	v.	6.5			:	H.	18.9	18.2	13.0	13.0	
V A O			SPEED	186	669	029	828	243			0.3	9 9	25	17	828				EED	30	0 '	n :	104				ial lai	3.0	6.5	0 -	t v	
		PEAKS	*	-38	7.0	504	134	151		PEAKS	-	-39	7	0.80	100			PEAKS	2	11	0 -		7.7				2	-	6.3	//!	103	
3	n		>	+	8 6 0	689	167	760			>	+10	959	0 10	124				>	179	D 6		3.3		9		>	179	0 6 1	123	111	
-			0	1120	042-	7 7 7 1	-238	-360			>	956	7 00 0	1000	-375				P	187	5 a		191				0.0	r	T M	1 30		
HE I GH			MIN	-	7	~	7 .	'n			иІи		7 -			18			н 1 и	- 1	7 "		15				2 .		7 -	7 3	ur)	

	0:21							
•	0:		9	0	0.0	1 2 2	101	9
ARTTIN	END TIME		ī					337.5
	Z W	11	SPFFD	æ	897	842	850	837
HU270		WAVE F	3	0	-20	1 7	ď	- 50
ALA.		SINE	>	999	7 7 9	527	795	773
			0	174-	-624	661	-300	-319
HUNTSVILE		1	30	21	9	38	7	30
911	57		20	70	25	38	œ	1.8
12/07/7	JTE MEANS	DEFFICIENTS	H	318.3	312.7	24.8	341.7	334.8
A 0	ONE MINUTE	CUEFFIC	SPEED	711	674	655	756	678
	0	DURIER		54	87	9	6 9	16
		10.4	>	204	457	367	718	609
			-	-472	1001	147	-236	-294
HRECZ		-	TH	335.7	296.8	331.2	346.3	340.5
VAD				7 10 11	100	-T	120	-760
		PEAKS		15	11	147		
. 0.4			٠	605	+54	156	659	17.
			2	1363	(E)	7	Cho.	4
HE I GH			нти	418	7	F)	7	r

10: 0:21			0	2	3		200				0		9	2 0	2																
<u></u> 0		5	4	1	•	•	2.0			SP	9	•	•	•	•																
START TIME END TIME		ī	330.7	329.6	333.2	335.9	329.0			Ŧ	330.7	330.3	331.5	332.2	331.4																
		SPEED	872	016	901	047	878		1.1	SPEED	872	884	891	006	895																
HD270	WAVE FIT	3	6-	95-	-57	- 20	1 2 0		WAVE FIT	3	•	-21	-36	-33	-37				I	3	•		15.4			Ī			3.1	2 . 8	3.5
	SINE	>	758	784	108	9 6 4	4 4 6		SINE	>	758	767	782	196	184		FIT		SPEED	69	0 4		641		F 1.7	4	,	10	53	7	7 1
11.		0	-427	654-	101-	-386	- 426			D	-427	-438	+2+-	91+-	-420		WAVE			50) 1	- 0	0		MAVE.	3			2.4	. 7	27
HUNTSVILE	-	30					28		-	30	9	6 1	1.1	9 -	6-1	57	SINE		>	9.2	0 7		546		SINE	>	a c	0)	25	7,	0.50
s s		20	54	20	13	22	35			30	74	23	6	6 1	22	VIATIO			0		0 0		125	DEVIATIONS		0	0	- :	è .	- c	6 7 9
VAD 12/07/76 ONE MINUTE HEANS	IENTS	I	329.5	323.7	334.7	334.5	324.3	CUMULATIVE MEANS	IENTS	11	329.5	327.6	330.4	331.1	329.4	MINUTE STANDARD DEVIATIONS	1 5.		Ι,	2.0	0 -	3	13.5	A P D DE V		ī	2.0	n =			7.7
VAD ME HILL	COEFFICIENT	SPEED	701	950	7 7 8	643	0 8 9	HULATI	COEFFICIENT	SPEED	701	684	7 48	731	718	TE STAN	COEFFICIENTS		SPEED	7) 1		158	CUMULATIVE STANDARD	DEFFICIENTS	SPEED			76	101	100
0	FOURTER			-47	32	-82	4	00	OURTER			-37	0	-21	?					5	2	, 0	11	LATIV	0			2 :	2 2	9 0	2 5
	100	>	602	524	158	5.81	555		100	>	602	576	649	638	617	ONE	FOURTER	:	>	c :	2 4		213	COMO	OUMIER	>	4	e t	5.	7 1	128
		D	-356	-384	-364	-276	-376			כ	-356	-345	-345	-380	-356				> ,	,	130	2	3.6			>	74		200	11	00 4
H REC2	-	ī	336.3	330.8	326.6	336.8	318.3		-	Ŧ				332.2					Ι.	14.5	13.4		15.4		-:	T.	12.5			0.0	00.1
> A		SPEED		924	933	993	9 0P			SPEED	516	385	+0+	616	6.6					,	0 0	0	163			PEED			101	10	0 0
	EAKS			5.5	171	00	7.4		PEAKS		69	6 9	106	87	00 CO		PEAKS			200	2.5	0	19		PEARS	3	-	0.0	202	200	7.3
.06	d	>	826	120	766	315	909			>	978	191	185	803	154		1		,	,	127	0	197			>	4.1	. 4	29	a	1 5
*		0	-367	105-	-505	139U	-510			0	-367	-378	624-	-453	* * * * * * * * * * * * * * * * * * * *				0 0	007	2	10	5.4			>	200	143	163	7 7 7	125
11 JGH		Z E		2	3	,	.5			NI II	-	7		, C.	s -20				2 -	- 1	, -	3	S			211	-			, ,	r in

10: 0:51			SP	5 3	52	19	1 0	£			SP	53	5.4	19	67	0															
END TIME			I	3.4.4	328.9	324.1	343.0	338.6			ī	319.9	325.9	355.5	331.3	5355															
O N	_	- 1	SPEED	999	860	0 + 6	843	747		111	SPEED	5			985																
	MAVE FIT			- 34	-	-30	-34	174		WAVE		-34	-13	-17	-25	- 34			;				5 • 5	•			ī	0.	7.9	9.9	10.7
	SINE		> :	709	129	762	852	882		SINE	>	662	101	721	197	10/		F17	200	1	7.7	0	9!	0		F 1 4	SPEED	0	55	5.9	47
			> ;	-550	1 4 4 6	-550	197-	1344			>	-556	-482	065-	-420	101		WAVE			9	, 0	00 0			¥ A V E	3	D	32	28	32
	-		30	~	00	17	90	6		-	30	٣			1.5		SNC	SINE	2		0 0	0	10	>	9	SINE	>	0	36	4.2	75
S			20	•	1.7	22	47	54			20	3	13	1 5	60	-	DEVIATIONS		:	,	0 0	0	9	0	.01141		כ	0	123	106	153
TE MEAN	LENTS		I	317.9	336.4	316.8	342.4	342.1	E MEANS	1ENTS	Ŧ	317.9	330.2	326.9	332.1	333.5	STANDARD DE	2 8					14.1	•	SHOT FAT VIOLENTIA	2	Ŧ	0.	12.4	12.1	13.0
ONE MIRUTE MEANS	CUEFFICIENTS		SPEED						CUMULATIVE MEAN	COEFFICIENTS		5	00	3	179			DEFFICIENTS		22.5	0 6	0	45			COEFFICIENT	SPEED	0	90	8.5	67
0	N 31 HOO		*	31	24-	-13	5	126	D D	OURIER		37	-15	- 15	Ŧ ;	17	MINUTE	U				0	113	D	A TIME		•	0	47	36	44
	004		>	079	653	979	126	738		F 0 L	>	620	249	639	199	0	ONE	OURTER	2		0 -	7.	1001			OURIER	>	0	2.1	6	5.4
)	655-	-289	-586	-224	-237			٥	-559	-379	164-	-362	* * * * * * * * * * * * * * * * * * * *				>	2 4 0	4	166	0			٥	0	179	179	161
	-		I	321.0	325.5	341.6	333.1	330.5		-	ĭ	321.0	324.0	328.4	330.0	330.1		-			0. 3	0	0.9	•		-	1.11	0.	10.5	12.3	10.2
			SPEED								SPEED	96.1			626				- 1		0 0	0	5.4				SPEED		3.0	5.2	2
	PEAKS			1117	7.3	178	13	503		PEAKS			99	110	100	115		PEAKS			0 6	0	104	5		PEAKS		0	43	69	7.2
			,	299	733	921	0.70	2 7 10			>	700	713	165	193	900					0 0	0	23				>	0	116	+ 1	114
			7	-634	705-	-305	165-	5 2 5 1			7	+534	1813	196-	155-	7.0				0	٥.	0	100	0			0	0	122	**	121
			nln	-	7	~	*	S			:			-	*	2					- 0	• ~	7	n			212		. 2	3	7

9:55:21																																		
0			26	28	62	178	50	70				92		000		11	1,4																	
START TIME END TIME			Ξ.	326.2	327.7	97.0	335.9	329.8				ī	327. 3	350.2	359.6	151.7	348.6																	
	=		SPEED		890	828	916	912			11	SPEED		807	880	892	895																	
H0270	WAVE FIT	:	z '	7-	-28	5.4	-30	-34			WAVE FIT	3		7		-	-			1	-	3.6		2 . 3	•				I	•	2.7	6.4.0	51.8	48.0
ALA.	SINE	;		90/	152	66-	835	788			SINE	>	154	754	5 40	639	099		F11	0	2 0	2.6	0	7 9	0		:	-	SPEED		7	x	5.1	47
			0 3	906-	-473	822	-374	458				D	404-	1 2 2 2	-157	-230	-262		WAVE	3		22						4 4 4 4	3	0	2.1	7	36	34
MUNTSVILE	-	,	900	.,	9	34	=	15			-	30	00	22	25	2.0	6	S	SINE	>	0	11	0	7	0	s		SIME	>	0	5.5	429	366	339
36		20	,	75	27	30	9 [6				20	33	28	56	54	54	VIATIO		ח	C	1 9	0	2.9	0	MATION			5	0	23	454	519	482
YAD 12/U7/76	CIENTS	2	230		321.9	90.5	336.7	323.4	2111	COMOLATIVE MEANS	TENTS	11	330.4	324.7	356.2	349.7	345.9	STANDARD DEVIATIONS	1 5	=======================================	0.	7	0.	9.	0.	STANDARD DEVIATIONS		0	ī	0.	5.8	63.1	. 6 4	4.6.6
O H BY	COEFFICIENTS	0.1303	3.5		120	105	837	845		OLA II	COEFFICIENTS	SPEED	7.4	718	715	755	168		COEFFICIENT	SPEFU	0	38	0	-	כ		111111111111111111111111111111111111111		SPEED	0	27	23	99	88
0	UURIER			0 .	9	~	67	-	-	00	OURIER		6 4	7.2	53	5.8	20	MINUTE		3		3.2	0	4.7	0	CUMULATIVE			3	0	5 4	24	0 %	2+
	101	>	420	0 70	200	5	167	674			600	>	620	584	437	247	595	ONE	FOURTER	>	0	7 4	0	1.7	0	CUMU	OURIER		>	0	5.5	565	288	267
		13	- 16.2		7	507	-330	-500				0	-352	-412	-135	861-	-241			>	0	20	0	99	0				3	0	2.5	195	1++	7 7 7
HRECZ	-	7	111.2	3	368.7	306.2	336.8	336.2			-	ī	333.2	330.4	324.3	328.5	379.6		-	Ŧ	0.	4.6	0.	- 0	•		-		H	0.		12.5	12.2	11.5
, A D		**		4 6		•		***				0	75	988	7	5 1	2			0334	0	5.7	Ð	1	-				العا	0	5.3	6.5	4.4	7 5
	PEAKS		Bell	0 0		415	0	120			PEAKS	3	0.8	0.6	121	7.0	76		PEAKS		0	53	0	0.0			EAKS		5	0	2.2	9.2	1 1	13
• 02		>	147		0	2 40	838	5 0				>	20	169	N		P.			,	0	79	5 ,	n s	2		6		>	7	4.5	16	E 6	
641 = 2		0	. 20.	7 30 -	1001	-000	+356-	-368				- 0	65	-430	25	47	37			D	0	4.7		171	0				ח	2	50	TO .	178	0
7E 1 G		MIN	-		4 -	7 :	,	0				или	-	7			.22			2	-	2	٠.	, n					нІп	-	7	£ :	7 0	

	9:55:21																																									
	2			5	10	9 7	9	89	130						SP	4 4	9.5	29	09	20																						
	START TIME			7	324	2.076	327.7	306.7	326.2						=	326.4	327.2	322.1	323.5	2511.1																						
•	E S		F 1 T	SPEFD		0 0	404	435	918				-						916																							
H0270.			A V E	3	. 5.8	0.77		0 '	7 -				MAVE FIT						132						ĭ	0.	5.4	0.	16.5	0						ı	•		10.01		-	7.11
ALA.		1	SINE	>	787	744	0 9 9		535				3 1 1 5	>	101	101	7//	9 1	697				F11		SPEED	0	20	0	97	0				_		650		æ		, ,		
HUNTSVILE)	-523	4 4 8	-740		4 - 0 -					0	-4.33	000	0 0	000	1548				MAVE F			0	01	٠.	2 .	0				MAVE FIT		200	0	13	2.1	3.1		
HUNT				30	52	28	3	25	3.1					30					56		ž.		SINE		>	0	0/	133	271)				3 2 2			0	S	<i>*</i>	104	>	
9111	, NS			20	48	32	-	5.8	3.1		•			20	3	3.7	31	: =	31		DEVIATIONS			-	> 1	0 -	- 0	220				E10114						54		4.6	37	
12/07/1	ONE HINUTE MEANS	TENTS		Ξ.	2.00	359.5	305.2	318.1	309.6	CUMULATIVE MEANS		IENTS.		H	315.1	324.5	119.7	1.6	317.8				-	1				0.61	0.				-		I		•	£ .		2.6	2.2	
VAD	ve mint	COEFFICIENTS		STEED	2 4 4	685	920	674	726	ULATIV		COEFFICIENT							709 3		MINUTE STANDARD		CIENTS	PEru		0 0	0	2	0		STAL DAP		LENTS		EU	1)		5 5				
	ó	FOURTER (7 .	S	56	-28	100		UNHIER C		·							MINUTE		COEFFICIEN	a S		00	Û	4.7	0				DEFFICIENT		* SPE							
		104	4	. 65		0 .	() 5 5 ()		~ 4			FOO	**	>	777	534	533	218	510		ONE			>	0	59	0	156	0		CUMULATIVE		D WALLEY C		>	-0		8 2			. 1	
			2	-422	0 77 -		107	0	501				2		77.	-373	144	167	- / /					2	٥	2	0	171	o				F 0.0		Α.	0		102	A.R.	0.0	20	
HRECZ		-	ĭ	3.25.5	332.4	317 6	111		•			-	1	35.5		30.4	7.17	23.5					:	н.	0.	13.7	0		0.							0.	0.5	1.1	0.0	4		
V A D			SPEED	290									144	1		0 0			,					4.0		10												5.5	7	~		
		F A R S		2 в	5	15.6	- 40	99			3 6 3	0 4 4 4		9.2	100		511	101				AKS		39.6	0	7	0 5						5 * 4	2.3.3			15	* *	1 4	2.0		
360.			>	711	155	121	193	677			3		>	711	740	136	145	111				4 4			0 0	0 0	8.00	2					1					1.5	25			
16H1 = 3			3	785-	0 2 2 4	1)99-	-401	-183					- 0	184-	175-	185-	****	915-							0 4	0	195							0	-	- 2	٠,	141				
nt 16			NIN		,	(4)	*	un.						-			,	5	23	3			MIN			e m	,	LS.						HIN								

121																													
9:55:21 10: 0:21		9	, !	24	55	8		101			9			47	62	89													
END TIME		1		321.0	325.7	313.3	7 7 7 7	317.8			1	, , , ,	327.0	324.0	321.3	320.9													
N W	-	200	2 2 2	843	922	8.85	000	9 1 4		-	CPFFD		843	000	902	168													
	WAVE FIT			-13	- 38	- 26		50		WAVE FIT	3		-13	- 26	-27	-24			Ŧ	8 • 7	10.3	34.0				ī	8.7	7.9	
	SINE	>		150	160	407	6 8 3	603		SINE W	>		057	725	685	674		F11	SPEED	۰	72	9 5	2		F17	SPEED	۰	5 2	0 11
		=	0	+ 4 4 4	-508	- 443	1	-546			=		177	144	-538	-539		WAVE F	3	S	01) 1	0		WAVE F	3	S	9 :	
	-							54		-	2				20	20	5,	SINE	>	0.8	152	9 00	0	•	SINE	>	0 8	00	
		00		21	18	2.0		97			20	,	77	, ,	23	23	114110		>	110	96	344	0	DEVIATIONS		>	110	86	
ONE MINUTE MEANS	IENTS		-	326.5	325.2	308.1		314.6	E MEANS	1ENTS	3		326.5	325.7	318.2	317.8	MINUTE STANDARD DEVIATIONS	1 5.	Ħ	17.4	9.41	20.00		ARD DEV		ī	17.4	13.1	
M M M	COEFFICIENT		27550	147	199	103	2	722	CUMULATIVE	CUEFFICIENT	0		147	173	758	753	E STAN	DEFFICIENT	SPEED	131	3.6	o -	• 0	STALDARD	CHEFFICIENTS	03349	131	9.5	
6	x			7 7 1	14			-20	COL	FOURTER C	3		7 .	1 2		*		U			33	0 0	0	CUMULATIVE			4 3	1.6	
	FOURTE	2		620	6 4 3	0 0		507		F 0 U	>		620	156	2 - 5	237	ONE	OURIER	>	232	T	11.		CUMO	OURIER	>	232		
		:	,	-385	754-	264-	***	-513					-385		-449	+ 4 + +		•	>	117	188	0 0	5			>	1117	7	
	-							354.4		-		1			325.9			-	Ŧ	10.6	is a	0.46	0		-	ī	10.6	10.5	
			1	959	000	0 0		882			0	1	968	0 0	000	900			SPEED	55	6) c	9 0			SPEED	55	7	
	LAKS.			18	141		111	107		PEAKS			18	10.	101	101		PEAKS		2.0	71	7.	0		PEAKS	3	2.0	3.8	
• 0 • 6	•		,	715	51 11	250	171	878			-		715	5/1	124	1.43				+1	0.7	9 00					1.43	108	
			0	-526	41.1	2 2 2 2	155	± 5 - ¢			-	0	-526		-473	+2+-			73	100	-	2 2 2				0	100	124	
#E 1 6 H 1			W I W					* 0				2		7	7	-2			2	-	7	7 3				N I N	-	2	,

5:25				•	9	4		n -				0	2	1	3	0															
5:01		0	,	9	00	• •	0 (2 -			SP	•	75	1	80	6 0															
START TIME END TIME		7		344.	338.9	324.4		315.5			ĭ	344.1	342.4	337.9	327.6	324.5															
51 EN F14	-	200	31 550	146	769	741	-	800		<u>-</u>	SPEED		728	731	747	783															
A A VE	1	3		-27	- 1	8	00	9 6		WAVE FIT	3	-27	-21	-25	-32	-4-			ī	16.1	0.	•	8 .	7.97			E	1 . 9 !	11.8		
SINE		>		703	647	402	*	000		SINE	>	703	685	499	665	009		F11	SPEED	7	0	0	2 -	2		F11	SPEED	7	30	25	
			0	661-	-74B	00.71	000	1000			5	661-	-215	647-	-385	-436		MAVE	3	22	0	0	œ ·	•		WAVE		22	1 9	<u>a</u>	0
-	•		0.	2	14		7	2 - 2		-	30	7	^	•	12	13	52	SINE	>	09	0	0	117	286	s	SINE	>	0.9	4	07	-
s			2	1	8		0	27			20	1	-	01	+	16	VIATIO		>	199	0	0	33	8/2	IATION		>	193	7	03.	
ONE MINUTE MEANS COEFFICIENTS	6 11 3	7.		345.4	335.5	322.7	35661	313.5	E MEANS	IENTS	Ŧ	342.4	340.1	335.7	324.9	322.1	STANDARD DEVIATIONS	1 5	ī	15.2	0.	0.	5.5	*	STANDARD DEVIATIONS	2	Ξ	15.4		. 2	
NE MINUTE ME CUEFFICIENTS	0	01100		682	40.8	111	0/0	204	CUMULATIVE	COEFFICIENT	SPEED		657	662	639	674	E STAN	COEFFICIENTS	SPEEU	7 9	0	2	08	123		COEFFICIENTS	SPEED	+ 4	62		7 5
20 831.8				33	•		3.	- 0	3	FOURIER			28	30	52	7	MINUTE	COEFF	*	13	0	0	- 1	t n	CUMULATIVE	COEFF		13	7	0.1	7
0	3	,	•	637	2 4 5		100	321		FOUR	>	637	603	165	105	* 6 +	ONE	OURIER	>	S	0	С	1.3	5	CUMUL	OURTER	>	.S	6.5	1 7	-
			0	-210	-251		011	9 10 10 10 10 10 10 10 10 10 10 10 10 10			0	-210	-224	-270	-345	-367		•	>	190	0	0	10.	1			>	190	137	777	
-	-							318.0		-	11		328.9					-	ī	14.0	0.	0	10.3	5.2		-	H.	14.0	5.02	17.0	0.
								0 0 0			SPEED	40	164						SPELD	0.	0	0	* 0	-			0.3		9.2		
F E A N S	4			9.5	1.4		701	194		PEARS	c	*	3.0	19	129	1.46		PEAKS		1111	0	0	6 F			PLAKS	A SPE	111	DH.	-0	
•				136	1111		0	16.4			>	130	635		5+9	600			>	113	0	0	124				,	113	197	141	
и				-270	1155-		-360	1999			0	-7710	- 343	- 354	-425	986-			0	164	0	5	76	9,			0	1.91	166	1 7 1	
18.13.		- 60		-	N		1	* 1			=======================================		2			s -2			2		2	3		n			2		2		

5:52												_	•		•																
:01			SP	73	87	26	26	5			SP	1		7	9	6															
END TIME			11	327.9	324.0	308.9	311.1	324.6			H	327.9	325.3	321.2	317.8																
EN			SPEED	156	156	864	872	874		F 1 T	SPEED	156	756	783	813	170				0			m c					0	7	,	
	113 37 43	J	3	-33	0	-36	- 36	0-1-		WAVE	3	-33	01-	-10	-23	n .			Ŧ	٠	10.	•					F	•	7.7	10.	
		3.10	>	641	809	545	295	712		SINE	>	1 4 9	619	599	587	000		F11	SPEEU	n	21	0	76				SPEED	0	1.5	55	7 7
			ס	104-	-437	-477	864-	905-			0	1401	-425	-487	-537	533		WAVE	3	0	œ	0	• •			MAVE	*	0	20	2.1	
		-	30					α		-	30	2	01	+	81	_	5 N C	SINE	>	0	44	0	219	,	4 S	STME	>	0	7.1	10	
ú			20	13	37	-	27	18			20	1 3	29	30	53	27	DEVIATIONS		ס	0	66	0	158		VIATIO	_	כ	0	7.3	137	
MA HE MENTER MEANS		2 1 1	11	323.6	316.3	300.8	3000	317.8	CUMULATIVE MEANS	CIENTS	Ξ	121.4	318.8	314.3	312.6	313.4	STANDARD DE	1 21	11	0.	12.0	0.	27.7		STANDARD DEVIATIONS	15	I	0.	9.5	•	
1		COFFFICIENTS	SPEED	169	650	000		. c.	HULATI	COEFFICIENTS	SPEFU	, ,	200	602	679	454		DEFFICIENT	SPEFD		92	0	11		E STA	DEFFICIENT	SPEED	0	100	83	
ċ		H31 H00	*		7 .		37	8 8	00	DURIER	3		- 27	-2H	6-	J	MINUTE	U	•	0	1	O	77		CUMULATIVE	H COEF	*	0	30	25	
		004	>	3	100	133	775	621		004	>		1 1	417	614	37 30 30 31	ONE	FOURIER	>	C	145	0	596		CUMIC	FOURTE	>	U	133	126	
			n	3		0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-563			=	,	2000	615-	1 + + 1	1458			3		20	2	150				>	0	2 2	83	
		-	1		_			321.5		-	2				319.3			-	1	0	•	0	21.9	•		-	1,			7	
			0 1 1 1 5	1.13	507	, ,	258	9 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9			0		C 3	C	9 6 9	7			03.33	1	ur .	0	3.1	D			SPEED		4.7	47	
		LAKS			-		1	507		PEAKS			= :	2 4	6.2	9.3		PEAKS	3	0	0	10	9	5		PEARS	•		2 6	0	- 2
•		1	7		2.5	0.40	2/10	1150					247	200	119	679					3	0	+17	٥			,			0 0	
, H					6/1-	507-	-633	-526				0	-475	175	-532	785-					2.0	0	202	3			19		5 5 5	6116	100
11.10.11								* .n				2	-	7 -	7 3	2				2 .	- 0		*	un.			2			, .	7

0: 0:25		SP 78 75 75 68 65		۵	78	7.5													
START TIME 10; End time 10; 5		325.5 325.5 304.2 318.4		TH S	325.5	319.6													
HD270. ST	111	SPEED 6 697 6 768 1 850 2 862 1 925	=	S	6 697					0 ^	00	0			0.	, ,	5	c D	
Н02	WAVE FIT	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	WAVE FIT		900						• •			1				12.8	
A L A .	SINE	574 612 478 644 077	SINE		574			F11	SPEED	12	9.0	٥		SPEED	0	42	63	9 6	
HUNTSVILE	_	-394 -417 -702 -571		כ	1 4 0 4	-512		WAVE	3	27	0 9	0	X V E	3	0	54	- :	- œ	
1 5 5	Ī	30 25 22 22 8	_	30	20 0	1.4	SNO	SINE	> "	173	0 0		SINE	>	0	124	1 8	117	
/7 6 4S		20 36 13 25 25 20	s	20	0 1 5 0 1 4 5 0	31	VIATIO		> °	231	2.5	D 1 1 1 0 0 1		>	0	7 9 7	198	7 6 7	
VAD 12/U7/76 ONE MINUTE MEANS	CIENTS	323.4 327.7 302.2 321.9 322.0	Z	Ŧ	323.4	320.8	STANDARD DEVIATIONS	1 51	Ŧ,	20.2	7	STALLDARU DEVIATIONS		Ŧ	0.	14.5	9.9	12.1	
VAD	COEFFICIENTS	59 EED 454 6 446 892	MULATIVE MEA	SPEED	521	607	TE STA!	DEFFICIENTS	SPEED	0 0 0			COEFFICIENTS	SPEED	0	5.3	7 -	7 0	
	FOURTER	3 6 8 1 2	3 I HO	3	1.57	-37	E MINUTE	U	*	3 0 0	3 0 0	CUMULATIVE		3	0	30	5 -	9	
	0	454 454 420 507 703	0	>	424	181	ONE	FOURIER	>	8 5	22	5 50	FOURTER	>	0	9.5	707	115	
		1288		2	-270	1384			2	691	2000	2		3	0	120	215	165	
HRECZ	-	309.9 309.0 320.7 312.9 329.5		I (309.9	312.4			H.	9.2	່ຕ້ວ		-	ī	0.	6.5	e - 0	5.6	
4		SPE C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		SPEED	128	878			E E D	5 0	25			0334	0	3 :	102	110	
	F + 4 + S	3 7 7 7 7 8 8	PEAKS	3	-31	32		PEAKS	s SF	5.5	40		PEARS	5	0	æ ~	7 6	110	
•		Y 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		> 1	458 458 514	544			,	9.7	20			>	0	11	111	145	
n 		2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3		0 3	-560	-578			5	0,6	2,2			>	0	76	11	B 2	
HE 16H		2 - NM + S		Z -	-~~	+ 5 C-27			z -	~ ~	1 W			z E		, .	7 3	S	

2 2																															
10: 5:25		SP	7.3			125	9	7.3				SP	1.1	92	100	6 6	0														
END TIME		ĭ	339.0	307	0000	333.1	317.1	321.9				ĭ	339.0	317.3	321.3	319.9	250.5														
EN	_	SPEED	786	105	001	175	098	9101			_	SPEED	784	732	730	773	900														
	WAVE FIT	3	4	. 1	9	-	8	-78			WAVE FIT	3	1	. 0	-3	٠, ۱	n •			ĭ		11.6	•	13.6				ĭ	0.	20.5	
	SINE	>	734	717	. :	9 4 9	621	199			SINE	>	734	525	553	576	000		F11	SPEED	0	12	o	~ •			11	SPEEU	0	4	
		n	-280	0 1 1	100	-35/	-576	-625				>	-780	995-	-431	0 0 0	006-		WAVE	3	0	• 0		• 0			WAVE	3	0	7	
	-	30									-	30	-	2	23	~ =		5	SINE	>	0	121	0 .	00		2	SINE	>	ū	203	Contract Street
s		20	29		2	25	52	4				20	29	8-	27	97	,	VIATIO		D	0	75	0 !	÷ 0		IATION		>	0	169	
ONE MINUTE MEANS	IENTS	H	332.0	303	0.00	343.3	317.8	308.1		CUMULATIVE MEANS	LENTS	ĭ	337.0	312.0	319.8	319.1	0./16	STANDARD DEVIATIONS	2	11	0.	13.7	•			STANDARD DEVIATIONS	2	ī	0.	19.9	
VE MINU	CUEFFICIENTS							249		40LA11V	FOURIER CUEFFICIENT	SPEED	96		586				DEFFICIENTS	SPEED	0	J	0 0	<u>,</u> 0			COEFFICIENTS	SPLEU	0	1 6	
0	OUNIER	3	35		10		œ	-51		5	HIEH		35	32	2.1			MINUTE	U	3	0	0-0		0 0		CUMULATIVE		7	0	4	
	104	>	527	337	070	- x	505	396			104	>	527	393	٠ 1 م	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200	ONE	OURIER	>	0	124		• =		100	DURIER	>	0	141	
		n	-278	000	0.00	*	654-	-504				ס	-274	777	-346	166-	711		•	5	5	75		2 3			•	>	0	149	
	-	I	124.2		317.0	319.1	373.2	327.3			-	ī	124.2	321.1	320.6	321.5	366.3		-	ī	0.	3.1	•	• =			-	111	0.	3.5	
		SPEED	735		700	2 7 0	9 4 9	1101				SPEED	134	780	145	· ·	250			033	0	5.5	2 .	31				SPEED	0	5.5	
	PEARS	•	-21		70-	-	115	20.3			PEAKS		-21	24-	-28				PEAKS	* SF	0	4 :		. 0			F. B. A. S.	5	-	1 8	
		,	5+1		1 10	570	6/9	17.7					547	900	0 1 1	56.9	500			,	0	7.0	3	0.0				>	0	10	
		0	424-		016	1+5-	709-	986-				5	67%-	- 4 11 13	-6.01	705-	000			D	5	7	,	0 0				Q	0	5.1	
		MIN	-		,	7	7	S				415			٠		-2			1111	-	7	7 :	, 0				21 1	-	7	

٧.,																																	
START TIME 10: 0:25 END TIME 10: 5:25			SP	55	8.2	80	19	15			SP	52	69	7.1	89	0																	
RT TIME			H	318.1	327.1	309.6	326.5	316.8			Ŧ	318.1	322.6	320.0	321.8	35135																	
		<u>-</u>	SPEED							F11	SPEED	778	741	752	777	141							-	_							•	9 .	
HD270.		SINE WAVE FIT		•	26	0.1	-27	1		WAVE	3		10							F			0.							-		9.0	
ALA.		SINE	>	570	165	508	869	9.20		SINE	>		581						F11	SPEED							-		SPE			63	
		_	2					-608		_	n		-447						E MAVE	*			0				3 4 3					24	
HUNTSVILE			٣					3.6			•		54					5 4 0 1	SINE				0 0			9 8 9	-	21.15				1 B6	
1/16	ANS		20					5.6	SZ		20		32					DEVIATIONS	-	2			0			CHALLATIVE STALDARD DEVIATIONS		-				101 €	
12/07/76	ONE MINUTE MEANS	COEFFICIENTS	ī	122.8	233	3111	323.4	317.8	CUMULATIVE MEANS	COEFFICIENTS	I		328.0					STANDARD	115	-		- 4	.0	3.	•	0 4 0		N L S				6.9	
4 4 0	NE MIN	COEFFI	Chido	,				655	JHULATI	COEFF	Cardo		4 4	6.08	929	630			COEFFICIENTS	Grada	2	, ,		-		4 1 7		OEFFICIENTS	SPEED			3.5	
	0	FOURTER	3		0.00			- 1	Ü	DURIER			- 57					ONE MINUTE		3			0	Œ				U	*			65 2	
		1	Α.					185		•			107					0	FOURTER	2			0					FOURTER	>			25 0	
~		_						1 1 3 6		_	:		1001						:		0		, 0					:	>			1 120	
HREC					321.6	331.0	323.2	322.7					321.0	326 7	331.5	330.4									0.				-	-	- 0	6	_
V A D				SPEED	111	770	903	- p				'n				210					25.5		و د د						SPEED	1		5.7	
		PEAKS						7 m		PEAKS						13			PEAKS		*		123					PEAKS	*	0			
90.0								6 9 0								980					•	-							,				1 129
-								-196								-387									0							4 231	5 271
HE1641				MIN	-	7	•	7 00				2 1 1		7		- in	29				Z E	-	2	7 3	- 5				1				

START TIME 10: 0:25 END TIME 10: 5:25			SP	104	83	67	7.9	63			as	70	47	8.5	8.2	11																	
RT TIME TIME			Ŧ	328.3	321.2	320.7	331.0	325.4			1	126.1	326.0	323.8	325.0	325.1																	
STA			SPEED	736	649	798	192	871		F11	0 2 2 0 2	337	707	743	751	781													2	• 0	2	7	
HD270.		WAVE FIT			2	4	-23	-15		WAVE F			n -	; -	-2	1				Ŧ	20.2	•	3.6	• `							10.2		
;		SINE	>	809	206	111	664	711		SINE	;	> 0	909	1 6 5	¥0.8	635			F11	SPEED	17	0	5	0 9	0		-	SPEED					
11E ALA			n	-371	-405	100	505-	1				D	-371	188-	-423	1 + + 1			WAVE	3			12				FAVE	3			13	_	
HUNTSVILE		-	30	5				1.5		-		30	5 .	12		13		540	SINE	>	6 7 1	0	19	0 ;	3,	SNS	SINE	>				92	
76	S		20	200	30	2 .	97	22	s			20	54	26	2 0	542		EVIATI	-	>			31			VIATIO	_	5				103	
12/07/76	IE MEAN	ENTS	1	2333	1	210.5	319.7	328.9	E MEAN	LENTS		H	323.1	320.9	370.4	322.8		STANDARD DEVIATIONS	S	ī	20.1		.7	0.		0 08 40	1.5	H +	20.1	14.7	1.01		
V A 0	ONE MINUTE MEANS	CUEFFICIENTS						765	CUMBLATIVE MEANS	CUEFFICIENTS		SPEED	959	624	5 4 2	6 7 8			COEFFICIENT	Cases	27.	, -	105	0	156	SNOTTALVE CHAPTS BY THE HIGH	COEFFICIENT	SPEED	37	62	7.5	0 0	
	0.4	FOURTER C						37	200	POURTER			27	21	54	- 6		E MINUTE	R COEF	3		v C	45	0	21	2		1	2	10	24	25	
		F 0 U		>	213	405	217	529		10.		>	513	411	493	200		ONE	FOURTE	,	. :	0	89	0	121	3	FOURTER	>				5 -	
				0	-376	-383	-437	-405				>	-376	-378	-405	7051	,				, :	6	62	2	100			>				9 0	
HREC2		-			38	47	23	330.2			•	H	338.5	341.6	334.5	333.8	71.55		-		Ξ.	13.6	2.1	0	6.1		-	1	13.4	11.0	12.5	11.3	0.01
O W V				SPEED	809	169	870	151				SPEED		171	9	100	0				SPEED	*	0 7	, 0	4.5			0 4 3 d 5	1		9.0	7.5	13
		PFAKS			91-	-139	- 43	8 6			PEARS			-57	-51	-26	`		PEAKS			80	0 5	0 0	* -		PEAKS	*	a	0	40	ā	D
•				,	0.47	100	703	159				>	740	721	714	703	/1/				>	33	0;	2 3	T					7 7	a z	9.5	20
17 "				0	+52-	951-	113-	-372				10	2001	- 245	-351	-355	- 36.5				9	190	2 .	71	67				2 0	7	α	165	**
nE I 6H				MIN	-			າ 🕶 ເກ						- ~		т С	-30)			H 12	-	2	7 3	r un			1		- 6	4 17	7	d)

	0:25																																				
				SP	7.3	83	7.2	63	2. 00			:	4	7.3	16	15	73	ò																			
	START TIME 10:			==	341.9	329.0	317.4	325.5	330.5					341.9	337.6	344.5	328.9	****																			
	EN	111		SPEED	780	569	785	804	7 18		11	200		150	757	001	199																				
HD270		WAVE		3	7	•	+	0 0	67-		MAVE FIT	3			7		-10					1			• •		3.1					:	_	11.0	10.8	13.7	10.6
۲.		SINE		>	735	296	578	663			SINE	>	13.	001	0 4		677			:	=	Spre			4		20				FIT	0 3 3 0	J	1.2	2.0	7 1	0 T
HUNTSVILE ALA.				0 .	-534	-357	-526	1454				Ξ	010	-278	- 177		-402				2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				. 5	0	-				WAVE F	U		-	5.	n 1	
HUNTS		-	;	000	20	0 +	23	÷ .	2		-	30	20	27	25		23		SZ	1	2 1 1	>	8	c	9.5	0	1				SINE	>		n	0 0	> 0	2.0
911	5				7	6-	33	5 2	2			20	2.1	20	250	35	23		VIATIO			ס	138	C	28	0	15		ATIONS			2	, .	20	6-7-		128
12/07/76	ONE MINUTE MEANS	LIENTS			5./.5	3 30 • 1	317.2	331.0		CUMULATIVE MEANS	IENTS	H	347.5	341.7	331.9	111.7	330.0		ANDARD DEVIATIONS		,	ĭ	9.11	0.	-:-	0.	9.7		STANDARD DEVIATIONS		2 1	ī			13.1	7 . 7	13.5
VAD	NE MILL	CUEFFICIENTS	0 2 3 0 3		170	201	165	624		10LATIV	COEFFICIENT	SPEEU					637		5	DEFFICIENT		a		0	3.	0	1.1		STAND		EFF ICIENTS	0536			5.2	2 - 2	3.5
	0	OURIER	7		70	7	5	- a		3	FOURTER		5.5	5.1	37	11	40		MINUTE	COFF		3		0	5.5	0	2.3		CUMULATIVE		COEFF	5			2 7		7
		F.0.	>	400	0 0	435	735	2 4			FOU	>	009	545	500	204	534		946	OURIEN		>	1.4	0	101	0	7.4		CUMUI		OURIER	>	*		105	000	103
				- 1.3	2000	117	200	7 7				7	-133	-172	-261	-268	-315			L		2	127	0	63	0	13				u.	>	127	-	641	134	0+1
HRECZ		-	1	143.2	2300	323	340.0	339.7			-	H.	343.2	338.6	332.5	333.9	335.2			=		H	14.0	0.	14.3	0.	16.8				-	H	14.0	12.7	7.4	13.2	13.0
VAD			SPEED	T	4 3.7		700	453				SPEED	832	167	793	186	803					-1	3.7	0	121	D :	3.1					ELU	3.7	51	10.8	a o	œ
		PEAKS	*	- 34	- 22		-67	+			PEAKS		+ 34	-30	3	9.	23			FEAKS		¥ SPE	99	0	33	D 0,	* 1				FEARS	4 5 0	99	47	9	6.5	11
	•		>	783	5+5	7	2119	119				>	783	705	687	000	109			4		>	5.3	0	58	2 0	0			0			53	136	102	3.5	26
	•		7	1+2-	-323	-501	-245	-300					167.	-268	-341	776-	-331					n	504	0	230	24.2	6.7					2	504	152	204	189	υn αυ
1			m I m	-	2		*	.n				z I u	-	~			3	1				MIN	-	7	7 3	- 3	,					N. N.		2		5	r.

	5:25			4	54	7.5	63	55	6 3				SP	54	19	6.2	61	69																	
	END TIME 10: 5:25			S	333.5								ı			328.5																			
	END		F11		058 2								SP			1 796					I	.5	0.	• 3	0.	.,				1.H	• 5	.7	8.3	-	0
HD270			WAVE FIT	3	-12	-	_	-5(1		F12 0745		3	7	•	7	•	7			-	6				90								_	,
414.			SINE	>	753	653	602	109	398		NI	3116	>	753	720	673	199	595		F17	SPEED	49	0	34	0	131			11	SPEED	49	82	4 6	72	61
)	-380	-326	-486	-673	6 7 1				ס	-380	-362	-412	-455	-304		MAVE	3	0.4	0	10	0	09			AVE	3	40	33	54	53	33
HUNTSVILE			-		1 4							-	30	7	1.2	1.0	61	2.1	51	SINE	>	•	0	54	0	586	U	0	SINE	>	9	58	11	15	261
•				20	3.1	38	30	30	52				20	31	34	32	32	30	DEVIATIONS		5	15.1		52	0	834		201		n	153	113	106	145	439
12/07/1		TE MEANS	IENTS	Ŧ	328.0	333.1	322.3	304.7	29.1	CUHULATIVE MEANS		IFNIS	Ŧ	328.0	329.7	326.7	323.1	339.7	STANDARD DE	1 51	Ŧ	16.3		3.7	0.	80.8	7 00 00	STALLDAND DE	15 1	ī	16.3	11.9	9.5	12.4	1.5
VAU		ONE MINUTE	COEFFICIENTS	SPEFU	519	492	588	089	+89	HULATIV		COEFFICIENTS	SPEED		5.50	595	584	609		DEFFICIENTS	SPEED		2	20	0	99			FFICIENT	SPE			4 6		
		0	FOURIER	3	e -	-83	-54	97-	5.	ಕ		21200	3	a .	- 82	-71	79-	-32	E MINUTE	U	3	11	0	•	C	13		CUMULATIVE	R COE	3	27	6 1	2.0	29	10
			104	>	474	434	191	387	341			0	>	479	444	465	452	454	NO	FOURIER	>	0 1	0	-	c	433			FOURIE	>	5.9	T	34	7.7	176
				2	-304	-222	-359	-558	150				0	1301	-276	-309	-351	-225			>	10.4		74	0	686				>	156	120	9 6	134	347
HREC2			-	7	347.4	315.9	312.5	316.1	323.8			-	ĭ	347.4	334.0	327.2	175.3	324.9		-	I	. 1	0	10.	0	15.3				ī	6.3	18.7	19.5	18.0	16.3
VAD				01100	# 7 H	454	840	819	619				GPEFD	1	1,0	197	-	828			SPFED	1	10	16	0	17				PEED	00	115	00	0	8
			EAKS			-133	28	3.6	135			PEAKS		,	- 35	0.	-	3.2		PEAKS			,	5.4		5.75			PEAKS		7	06	7.3	¥	o a
	*0.		a.	-	403	111	568	6.33	060				>	-	000	643	7	659			,			163	-	159				>	501	507	190	191	151
				**	-173	-454	609-	604-	-506				11		0 7 5 7	505-	82.21	1 455			-			7	0	172				5	64	170	223	211	161
	ME 16H1				-			*	5				2			3 6		- s C = 3	2		2			4 19		· w				z x		. 2	3	*	vs.

Printed by United States Air Force Hanscom AFB, Mass. 01731

1

